THE

NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

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FARM OPERATIONS IN APRIL.

"Than in the country, tell me where
Men freer are from piercing care?
Where can they sounder sleep enjoy,
Or time more harmlessly employ?
Do marble pavements more delight
Than the green turf that cheers the sight?
Or does the water of the town
Taste sweeter than the crystal rills
That trickle down the verdant hills?"

IN this month the business of creation seems resumed. The vital spark rekindles in the dormant existences—and anon all things "live, and move, and have their being." The earth puts on her livery and awaits the call of her lord; the air breathes gently on his cheek, and conducts to his senses the warbling of birds and the odors of new-born herbs and flowers; the great eye of the world "sees and shines" with bright and gladdening glances; the waters teem with life; man himself feels the revivifying and all-pervading influence; and his

"spirit holds communion sweet
With the brighter spirits of the sky."

But this, though true of April, because it brings the first balmy airs and bursting flowers, is not all of *April*. Like the shifting scenes in the pathway of a good man's life, April has its clouds and tears, which succeed its genial sunshine, in chilling winds or storms of snow. But they are as evanescent as the month is fickle. The all-searching sun, strong and fervid in its new course, pours its melting beams upon them, and they disappear. Then the grass springs up, the flowers unfold, the earth opens her bosom and invites man forth to scatter seed into it, in the hope of a bountiful harvest.

The April work of the farmer is a sort of foundation-work for all the rest of the year. That which is not begun cannot be finished. Seed-time must be improved, or harvests will not succeed. Late in the morning, late all day. The laggard has no pluck. He who leads in the race is full of courage. And so it is on the farm.

April comes but once in a year, and April's work cannot be so well done at any other time as in April. Man cannot change the seasons at his will, but must perform the work adapted to them while they remain, or suffer the loss that is quite certain to follow.

The constant desire of the farmer is for more fertilizing materials in order to bring more profitable crops. There are two ways

of accomplishing this, which have been greatly overlooked.

1. The working of the soil. Growing plants have many roots, and as they increase in vigor are constantly throwing out new fibres in every direction. These fibres are in search of food. If the food lies in masses, only a few of the roots find it and the plant does not grow. But if the food is scattered about and thoroughly mingled with the soil in a finely pulverized condition the roots will find it wherever they may go. A peck of ashes may lie in the centre of a square rod of ground, and a few plants near it may be much improved, while those on the outer portions of the square would receive no benefit at all. Scatter the peck of ashes over the whole square and mix thoroughly with the soil, and the probability is that every plant on the square will be essentially benefited by it. Working and *mingling* the soil, is absolutely manuring it, because, first, it enables roots to find the food, and secondly, because it places the soil in a condition to be fed by the atmosphere. If *three-fourths* of all the substance of plants comes from the air, as is asserted by many scientific men, it can readily be seen how important it is that the soil be free from standing water, is fine, and all mingled together.

2. The next point greatly overlooked is the imperfect condition in which manure is applied to the soil. It is altogether too coarse and too unevenly distributed. A mass of one pound weight, finely divided and mingled with the soil, would probably exert more influence than two or three pounds lying in lumps.

Plants do not feed upon substances in solid form as cattle do upon hay or roots, but upon nutriment in the form of a liquid, and this liquid must come from matter dissolved from innumerable small particles which are lying about the roots of plants.

The way then to increase the manure, is by a more thorough breaking and mingling of the soil and of the fertilizing agents from the stalls.

The next important item in profitable farming is to have good seed. To accomplish this we must have a home-grown product; raise the seed ourselves or procure that grown in our own neighborhoods by persons who understand the business. Mr. Gregory, of Marblehead, in his excellent report upon Vegetables to the Essex County Society says:—"There can be no good vegetables without good seed, and earnestly urges raising among ourselves; says it will "annihilate the vast intervals that usually exist between the producer and the planter, and keep a wholesome responsibility within easy access of the purchaser."

We would caution all, however, not to engage in raising seeds, even for the use of a single farm, without first consulting those who know what good seeds are, and are skilful in producing them.

The next step to success in the April work is to *sow early*. Spring wheat and oats ought to be put upon soil that can be handled so as to get the crop in by the middle of the month, certainly; by the 10th or 12th would be better still. They need *April* influences in order to secure the fullest influences of May and June. And so of grass or any other seeds. Whatever the period of sowing is that is best adapted to them, sow them *early* in that period, whether it be April, May or July.

Many a crop is puny and unsatisfactory, even on tolerably good land, because it was not seeded in season to receive the peculiar influences it needed during its early growth.

For the New England Farmer.

THE GARDEN IN APRIL.

April brings us, here in New England, to the commencement of active out-door operations on the farm, and it is well if we have in the past months remembered the garden, and have done what we could by way of preparation for the planting season; and it will be well if in the press of other spring work, the garden is not neglected. Labor judiciously laid out in the vegetable garden returns a greater profit than a corresponding amount expended on other portions of the farm. Not only does labor in a vegetable garden pay, but labor rightly directed in ornamenting the home of the farmer and rural resident, also pays,—if not directly in dollars and cents, the same as a fine crop of corn, oats or potatoes,—indirectly by adding to the money value of a farm or place, by increasing its attractiveness. Not only this, it also imparts to rural life something of that attractiveness which draws so many to the more thickly settled communities, villages and cities. But how few farmers look upon gardening and home attractions in this light. Their good wives and families would appreciate the products of an early, good garden, and the handsome and neatly kept surroundings of the house. It is for the benefit

of the wife and family that we have so often urged the importance of the garden, and again say if you *cultivate nothing else have a good garden.* As a class, farmers are too much meat and meal-eaters, and to whatever else may be laid our lack of taste for vegetables, it certainly is not because they are not healthful, economical and enjoyable that better and fresher vegetables are not found on our tables at all seasons of the year.

A garden, to give its greatest profit, should have a little variety in soil, and the whole of it well drained, either naturally or artificially. It should also be protected from prevailing cold winds. The soil should be made rich and deep, not by bringing too much cold undersoil to the top, but by working and mixing with it suitable fertilizers, keeping the best soil at the surface and bringing but a little of the deeper soil up to become ameliorated.

ASPARAGUS —Clear off straw and litter, forking in the fine, using care not to injure the crowns of the plants. A sprinkling of salt worked in with the manure will be beneficial.

BEANS.—Little is gained in hurrying the seed into the ground, as the bean is a tender plant, and will not endure frosts. The soil needs to get well settled and warmed before they will grow. Prepare poles, if not already done. Do not cut them too long, eight feet is plenty long enough,— six feet and a half out of ground; cut them to an even length, and let them be straight and smoothly trimmed.

BEETS.—These are hardy, and the seed may be sown as soon as the ground can be worked well. The seed is hard, horny, and is sometime in softening so as to germinate. It would be well to separate the seed. That which is generally called a single seed is in reality several seed joined in a bunch, and unless separated will grow several plants.

CABBAGE TRIBE.—Borecole, or Curly Kale, Broccoli, Brussels Sprouts, Borage, Cabbage and Cauliflower, all are hardy and will endure, with little protection, considerable cold, and may be sown after the ground is well settled and dry, or may be sown in the hot bed, when desired for transplanting. All these make excellent greens while young.

COLD FRAMES —Except when the weather is cold or rainy these may be left open.

CRESS (*Pepper grass.*)—Sow as early as the soil and weather will permit, thickly in six inch rows. It soon comes up and the leaves are fit for a salad in a short time. Give warm soil.

GARLIC —A vegetable but little used, yet to those who are fond of onions in a milder shape, this may be desirable, its flavor being somewhat different. Sow seeds in rich, mellow soil, or set out divisions of bulbs six inches apart, in drills. Treat like onions.

HOT-BEDS —For general purposes farmers will find hot-beds quite as serviceable, made early this month as if made earlier. Directions have so often been given for making them that there is little need to repeat them here. The main requisites are a frame and glazed sash set over a bed, two to three feet of manure, for heating material, covered with a few inches of rich fine soil to furnish a foothold for the plants, or to deposit the seed in. The seed should not be planted till the heat recedes a little from its highest point, as it will go to 100 degrees or over, and prove fatal to the vitality of seeds.

LEEKS —Sow when the soil is open and warm; the seed may be mixed with onion seed, and the plants treated alike till the onions are pulled, when the leeks are left to grow.

LETTUCE.—Sow in hot-bed and in the open air as soon as the ground will admit. Varieties are numerous; some preferring one to another, so different tastes may be accommodated.

MANURE. —For the garden the manure should be free of weed seeds. Compost, stable manure and muck, half and half, well decomposed and fined, is the best general fertilizer. Liquid manure is one of the very best inducers to rapid growth. Sink a cask in the ground in some out-of-the-way corner, but of convenient access, and into it deposit all the house slops and any other liquid manure. Keep it well covered, and reduce it as applied.

ONIONS —Sow seed in rich well prepared soil. Yellow and white varieties are usually better flavored than the large red, but the potato onions are the best of all for table use. These are offsets from bulbs, which should be planted one foot apart each way, in rich, mellow soil, and the soil be kept loose and clean. Top onions and "rareripes" are set in similar soil, three to six apart, and rows ten to twelve inches.

PARSNIPS.—Sow in deep worked, rich soil, in drills, eighteen inches apart, thinly covering the seed half to three-fourths an inch and firm well. The seed is a long time coming.

RADISHES.—Sow in warm, rich sandy soil, protected from cold; water with liquid manure, to induce rapid growth; a slow-grown radish is usually tough and woody. Sow seed in any vacant place. Sow at intervals for a succession.

SEEDS —So far as possible test all before using. Sown in wet cotton in a glass or in moist soil, kept warm, they sprout in a few days, at most.

STRAWBERRIES, and other small fruits may now be planted out, pruned, tied up, dug about and manured, if not already done.

TOMATOES.—Sow seed in hot-bed, or in boxes of soil, to be kept in the sunny window of a warm room. Gen. Grant, Dwarf Prolific, Crimson Cluster, Fegee Improved, King of Tomatoes are the best.

TOOLS.—A few durable, light and good tools ought to be an appendage of every garden,

and these should be kept in perfect working order. Clean them every time after being used, as soon as done with, and put away in the tool room, under cover, where they will keep dry. W. H. WHITE.

South Windsor, Conn., 1870.

For the New England Farmer.

ARRANGEMENT OF BARNS.

DISCUSSION BY THE RANDOLPH, VT., FARMERS' CLUB

W. W. Walbridge. Twenty years ago there were but two barns with basements within two miles of this village. They are convenient for saving manure, and are economical because they afford additional room without increased expense in covering. Formerly little was done to save liquid manure, now every good farmer uses some absorbent to utilize the whole. Where one roof covers all the fodder and shelters all the cattle much time is saved in "doing the chores."

Rufus Nutting. In building barns reference should be had to the comfort of cattle and the convenience of those who tend them. The size of stables should be in proportion to the number of cattle kept in them. An animal's body will warm a space containing five times the number of cubic feet that its body occupies. I would not heat my stables to 60° or 65°, as is recommended by some, but would never have frost in them. I would never allow animals to stand on an inclined floor, as it is unnatural; prefer grooves between the planks to allow the liquids to run off.

Elijah Blodgett. Were I to build again, would clapboard my barn as much as my house; would never hang a door on rollers at the top, as they are continually getting out of order; would have a good number of windows, as light is conducive to the thrift of all kinds of stock; would finish off a root cellar in the basement. In some localities, would arrange a driveway over the beams, but on level land the profit of this would not pay the expense of construction. Roofs covered with slate will last for generations, but in these matters farmers must be governed by the length of their purses.

G. F. Nutting. I know of scarcely a barn in this vicinity that fairly answers the purpose for which it was built. On the Winooski river there are some of the nicest barns to be found in this State. My ideal barn contains the greatest amount of storage for the surface shingled, and has an upper driveway, that the crops may be pitched down into, rather than up on to the mow. The proper arrangement of the stables would be not so much for the convenience of the stock as for the man who owns it. Cattle are just as comfortable if their food is carried three rods through the mud to them, but the one that carries it is not.

J. W. Carter. Our barns are too far from our houses; it is irksome business to wade rods through the snow to do our chores. All animals love the sunlight, and the more windows the better. When the sun shines, my lambs crowd together in it, and seem really to enjoy it.

Samuel Howard. To obtain good crops from our exhausted soils, we must save all our manures, hence we must have basements. I would as soon think of building a house without a kitchen as a barn without a basement. It should be about eight feet deep, and then if one is lucky enough to own a muck bed, he can tip up his cart and unload without danger of breaking either the cart or his head. I would not undertake to finish a root cellar in the basement. It is difficult to make them sufficiently warm to be of use; the frost heaves and cracks the mortar; the doors swell and will not shut, leaving crevices to let cold air in, and your roots freeze. A stable for cows should contain a platform four feet five inches long, for the cows to stand on, then a drop of five inches; it should be roomy and well ventilated, not kept too warm by steaming manure or the breath of the cows.

J. McIntyre. Stable floors should slant a little backward. I believe it natural for cattle to stand with the head up hill. I frequently notice my cows standing with hind feet off the platform, four inches lower than their forward feet; and it seems to rest them.

A correspondent asks the following questions:—

1st. How to freeze water running at the door to fill an ice closet?

2d. Can anything be saved by feeding corn in the ear to store cattle, instead of grinding it?

3d. Which are cheapest, tin sap tubs at 33½ cents or good painted wooden ones at 25 cents?

Answers solicited, addressed to the Secretary of Farmers' Club, Randolph, Vt.

J. J. W.

LABOR IN AGRICULTURAL COLLEGES.—Prof. Johnson, of the Maine College, says:—"That the labor system is a benefit to the students, is very apparent. Aside from the amount earned, the labor performed keeps up industrious habits, promotes health, is to a certain extent a source of instruction to the student, and prevents that wide disseverance from manual labor and distaste for it which is so observable in the graduates of our old colleges. Besides, we think it plainly observable, that a few hours of labor each day makes the student more quiet and studious during the hours devoted to study. The time spent in labor would in most cases be spent in idle talk and in various kinds of recreation, perhaps of dissipation. Labor is the 'safety valve' for the overflowing animal spirits. There has been observed a remarkable willingness on the part of the students to engage in all the kinds of work required to be done."

MEADOWS AND SWAMPS.

UR fathers, in the early part of the seventeenth century, settled near tide water, at Boston, Dorchester, Charlestown, Newton and Salem. As their number increased, they sent out parties into the surrounding country to select suitable places for settlement. They pursued their way through pathless forests, wading the swamps, crossing the bridgeless streams, and climbing hills, and when they found a level tract cleared of trees, which had been cultivated in corn by the Indians, they selected it as the centre of a settlement, especially if it was near a stream of water. They inferred that if it had been cultivated by the Indians, it must be good land. Did not the Indians know what was the best land? So they settled on the borders of these old, worn-out plains, and planted their corn.

They had but few implements and those of the simplest form—clumsy hoes, and wooden spades, or shovels shod with iron, were almost the only tools they had.

Of course their cultivation was of the rudest kind, and it is no wonder that their crops were poor. But they were observing men, and they soon learned that although the lands they first planted were easy of cultivation, yet they would yield but little reward for their labor.

As their means increased and they obtained cattle and horses, and built themselves ploughs and carts, they began to cut down the forests and plant where the soil was enriched by the decay of vegetables for centuries. This virgin soil returned large crops, with even the slightest cultivation. They used but little manure, and when the soil began to show signs of being exhausted, they cleared another field and transferred their cultivation to that. But as in every new country, so in this, the process of exhausting the soil came to an end; and farmers learned by hard experience that if they would have the soil feed them they must feed it; yet many of them have not yet learned this lesson, except in theory, and so they continue to try to force a hard, dry and exhausted soil to yield a crop without furnishing it the means of doing so.

Now Nature has done better for them than they know. There is virgin soil all around them,—that is, soil made up of the *debris* of vegetable matter,—that has not been exhausted by constant cropping, accumulated in the meadows, swamps, and ponds. Almost every farm in New England has rich mines of this material, which have not yet been worked, and many of them inexhaustible mines, capable of making their owners rich and thriving farmers. It has been truly said that he who has a peat bog cannot be called a poor man. Now this mine of wealth may be worked in two ways.

One way is to transfer it to the dry and hungry soil in sufficient quantity to restore the waste which has been caused by long continued cropping, either directly, or by composting it with manure or other materials, and mix it with it by means of the plough and the harrow, until a deep and mellow tilth has been obtained to sustain the growing crops, and then by means of mineral materials, restoring what the soil has lost.

The other way, and that to which we would specially call attention at this time, is the draining and cultivation of the meadows and swamps themselves. Turn out the worn-out soils to pasture, or allow them to grow up to wood, and give your strength and attention to your low grounds, which have never yet been broken by the plough. When we see a farmer employing his leisure in digging ditches, or putting in tiles, or spreading sand or gravel on his meadows, we set him down as a thriving man, as one who will succeed. He knows where his labor will pay. Most of these low lands may be drained. Let them be well surveyed; ascertain where is the best out-fall, and how deep it must be made, and then set about it with a will, even if the main ditch has to be made four or five feet in depth. Having made the main drain, then make as many side drains as may be necessary to take off all the water standing within two or three feet of the surface. Tiles will be best in most cases, for the side drains. These will take up no land, and will be out of the way of the plough and the mowing machine. This is probably the most effectual and permanent method of reclaiming these lands. The draining accomplished, the subsequent treatment must depend

upon circumstances. In some cases, top-dressing, seeding and harrowing will be best. In other cases, ploughing and cultivating hoed crops until a good tilth has been obtained. Where the soil is sufficiently dry and free from stones and stumps to allow of the free use of the plough, this will generally be found the best method, and will most speedily destroy the sour and worthless grasses. The ultimate object of reclaiming such lands is to get them into a condition to yield large crops of good grasses, as this is in general the most profitable use to which they can be devoted.

During the process of reclaiming, potatoes will generally be found the best and most profitable crop for cultivation. Such lands when once brought into good grass will be found the most profitable land on the farm.

After the water grasses have been effectually rooted out, they will not require frequent ploughing, but should be kept in good condition by top-dressing with stimulating manures as often as may be required. Good loam composted with air slacked lime, or plaster, will be found a good top-dressing once in two or three years.

The products of such lands will be found the best means of enabling us to keep more stock, and renovating our drier and worn-out lands, and upon them we must depend for accomplishing this most necessary purpose. Indeed we see no other means by which it can be done permanently. Commercial manures may aid us in the work; but our old lands are exhausted not only of mineral elements of fertility, but of carbonaceous elements as well, and they need a supply of stable manures and decayed vegetable matter to yield the humus, the staple food of plants. This must be obtained by feeding to stock the grasses from our low lands, as the basis of our farm improvement. To this we may add superphosphate, bone, lime, plaster and ashes, and by a persevering use of them we may again take large crops from lands that now yield but a scanty reward for our labor. But we must begin at the bottom and first reclaim our low lands.

These lands, well reclaimed and enriched, are the very best soil for the cultivation of strawberries, cabbage, celery, and many vegetables for the market, and the market gardener will find in them a source of profit for which he is looking in vain in dry and exhausted soils. Such lands demand immediate, persistent and skilful attention, and it is through them that the labor of the farmer is to secure a satisfactory reward.

For the New England Farmer.

A VERMONT FARMER.

Young people who have been brought up on farms in New England are much in the habit of contrasting unfavorably the profits of the farm with those of the trades and professions; and many New England farmers contrast as unfavorably their advantages with those of the tillers of the prairies of the West. They dwell on the rough surface and hard soil of their farms, and the meagre returns which sometimes so poorly rewards their toil and risks and investments, without duly considering the advantages they enjoy of proximity to market, variety of products, good society, healthy climate, &c. Though here in Vermont we are more remote from cities and manufacturing towns, than the farmers in some of our sister States, it is believed that the industry and self-denial submitted to by the pioneer settler at the West, would be rewarded as richly here as there. I think there is danger of indulging these discontented feelings till we come to lose faith in the fact that here, as elsewhere, industry, economy and a good name are the best capital,—the surest means of success; and that labor, when judiciously applied to farming, is sure of an ample reward,—as sure and as ample as when applied to the speculative and distributative departments of trade, in which men hope to avoid the edict that "by the sweat of thy face shalt thou eat bread."

As an example of the reward which the soil of Vermont offers to the exercise of persistent industry, applied and guided by intelligence and an honest and faithful purpose, I will give you a brief history of one of your subscribers, Mr. JOHN QUINLAN of this town.

He was born in Tipperary county, Ireland. His father, several of his uncles and other near relatives were either stewards or herdsmen for large landed proprietors, and hence he was early in life familiarized with stock breeding and stock dealing, while his moral habits were influenced by the teachings of Father Matthew, and the direction of his mind by the eloquence of Daniel O'Connell, to whom he often listened.

Coming to America at the age of twenty, with scarce a shilling in his pocket, his good sense and mother wit soon won for him the confidence of men who were able and willing to give a *good word*, which is all anybody ever gave him; though I see I am about to perpetrate an Irish Bull, since even that was never *given*, as he most emphatically earned it by his faithfulness and punctuality in all the engagements of his early life.

Among his first homes about the time of his

marriage, which was soon after his majority, was the family of H. S. Morse, of Shelburn, a farmer of rare taste and energy, well known as President of the Vermont State Agricultural Society,—with whom he spent several years. He was next employed by Hon. Ezra Meech, one of the largest land owners and wealthiest farmers in the Champlain Valley. Here he remained, either for wages or as a tenant, until after he had accumulated not only a snug little sum of money, but a houseful of promising boys, when he made a purchase of a small piece of land,—less than fifty acres,—and commenced to make himself a home. Mr. Meech continued to employ him to make large purchases of live stock for his broad pastures, and with him he remained as a tenant, retaining his first purchase of real estate, until he had an opportunity to secure one of the best grazing tracts in the neighborhood, when his first purchase was sold.

With an invalid wife he moved on to his new farm, giving shelter to an older brother and family who had followed him to America. But his prospects were soon darkened by the destruction of his buildings by fire, which originated from a pail of ashes set in an outbuilding. This brother lost his life in this fire, in his daring attempt to stay its progress, and his sister, at the peril of her own life, rescued three little children, so badly burned that only one of them survived, which was adopted into the family of the bereaved uncle.

Notwithstanding the outlay necessary to provide a shelter for a large family, Mr. Quinlan was not disheartened, but repaired the wastes of the fire as well as he could, and went forward with the cultivation of his land. Soon afterwards, as he raised stock of his own, he took it to Cambridge market, and gradually added to his other business that of a drover, in which he of course met with the sharp competition of those who were already established in the business, so far at least as he purchased of others. But here, as in the management of his farm, his good judgment, indefatigable industry, fair dealing and honesty of purpose secured the respect of his associates at home, on the road, and at market.

Without detailing more minutely his business history, we will merely add that he now owns in "fee simple" one thousand acres of Champlain Valley soil, embracing meadow, pasture, and woodland, and that his home is in the midst of one of the most prosperous and enterprising communities in Vermont, and one which appreciates and honors him as a citizen and neighbor,—an appreciation and honor that has been manifested by entrusting him with public business and official duties.

Though not sympathizing politically with the party in power, he sent two of his sons into the army, to sustain the free institutions under which he had so signally prospered. Adhering to the religious faith of his fathers, he has been liberal in support of the services of the church in his neighborhood, which may be said to have grown up under his fostering care.

And now, young men of Vermont, you who have been brought up farmers, allow me to ask what advantages Mr. Quinlan enjoyed or now enjoys, of which you are deprived? And also, What do you think you will be likely to gain by changing location or business? W.

Charlotte, Vt., March, 1870.

MAPLE SUGAR MAKING.

The great secret of sugar making is in being prepared when the season opens; so contriving the operations of manufacture as to make them the least laborious; to care for the preservation of the forest, and save all the sap that is taken from the trees. There is probably no greater source of loss in sugar making than the waste of sap, and the waste usually comes from leaky store troughs, neglect, carelessness in gathering, and small buckets. How often does the farmer find, when going to the woods, "everything running over?" How long they have been doing so is not known, and therefore no correct estimate of loss can be made. But we can determine with some accuracy the loss attending the use of small vessels. We will suppose that in one-half of the camp tin pans, jars, or troughs are used which will hold but six quarts each, and in the remaining half buckets which will hold sixteen quarts each. Now, when the gathering has been neglected until the larger buckets are full, which will ordinarily occur several times in a season, there has been a waste of ten quarts at each of the trees having the small vessels, and supposing that number to be two hundred, there has been a loss of two thousand quarts, or five hundred gallons of sap, which, at a safe calculation, would have made *one hundred and twenty-five pounds of sugar*.

A number of years ago we knew a man who was particularly noted for the amount of maple sugar he made every season per tree, so much so that it was asserted he could get more sugar out of creek water than others could out of sap. When this man was asked for the secret of his success, he replied, "*I save all the sap.*"—*Ohio Farmer*.

METALLIC DOOR-MAT.—A new door-mat or scraper, has been recently invented in England. It is made of cast-iron, steel, or other similar metal. Its form is that of a trellis, the upper edges of which are sharper than the lower. It can be laid on a box, to receive the dirt which falls off from the shoes. The openings of the trellis may be of various sizes. The invention seems likely to be of use; it is very simple, and, no doubt, will remove all dirt from shoes or boots more effectually than the ordinary scraper.—*Manufacturer and Builder*.

MOUNTAIN SEEDLING GOOSEBERRY

The statement made by J. B. Moore, Esq., in his essay on the culture of small fruits, recently published in the FARMER, that the fruit growers of the town of Concord, situated twenty miles from Boston, received the past year, after deducting commissions, about eight thousand dollars, will be likely to arrest the attention of farmers and others in the vicinity of good markets. Mr. Manning of Reading, Mass., states that seven dollars and fifty cents per bushels were eagerly paid, for bottling, by a Boston Fruit Preserving Company, for a lot of fifty bushels of the larger varieties of currants, and thirty-five cents per quart were readily obtained for the Cherry and La Versaillaise varieties, at retail. For the purpose of suggesting the more extensive cultivation of small fruits by those within the reach of good markets, we present this week a cut of a gooseberry, which was originated several years ago in New Lebanon, N. Y.

The Gooseberry likes a good, deep, moist soil, says Mr. Fuller in his Small Fruit Culturist, but one that is not really wet. A rich soil is also essential, because it is only by keeping up a vigorous growth that large fruit and abundant crops can be secured. An open, airy situation is better than one that is confined, and in many sections of the country the north side of a hill would be far preferable to a southern exposure. The extreme heat of summer has been the greatest impediment to the successful cultivation of the English Gooseberries, and to counteract this, the coolest available situation should be selected. Also, in enriching the ground, use no fermenting manure; apply none but that which is old and well rotted. Cow manure is far better than horse manure, particularly on light, warm soils. Mulching the plants in summer is very beneficial, and if tan bark or spent hops from a brewery can be obtained, they should be used in preference to hay or straw. Good culture is required to produce good crops, the same as with other fruits.

Mildew is the great trouble in growing the gooseberry. Old plants are more subject to this disease than new ones. The following remedies are recommended. Scatter flour of sulphur over the bushes soon after the berries have set, and repeat the application occasionally until the fruit is ripe. Water the plants with strong soap-suds, or dissolve one pound of potash in a barrel of water, and then sprinkle the plants once a week with it. Soak fresh mown or dry hay in brine for twelve hours; then cover the entire surface of the soil about the plants with this, as a mulch. If hops, tan bark, or other mulch has previously been applied, then sprinkle it with salt; a single handful to each plant will be sufficient.

FARMER'S CONVENTIONS.

In Massachusetts—New Hampshire—Maine—Effects of—A new spirit aroused—Men find new powers in themselves—How lasting impressions are made on the mind—Value of a New Hampshire meeting—New practice in hay making approved—Capt. Taylor's statement.

The winter meetings among farmers which have been held in most of the New England States, for several years past, have met with general favor, and are producing excellent results. Nothing that has yet transpired, having for its object the promotion of our agricultural interests, has accomplished so much in so short a space of time. The meeting of the Massachusetts Board at Amherst last winter, and at Pittsfield the present season, brought out an amount of talent and interest in the cause that proved the existence of an under current of thought, comparison and experiment, which surprised the most sanguine.

The meetings of this season and of last winter, at Manchester, N. H., under the management of the officers of the State Agricultural Society, were distinguished by the attendance of large numbers of people, who manifested a deep interest in the objects which were brought under consideration. All the sessions had attentive audiences, and many farmers who had rarely, or never, perhaps, spoken in public, took part in the discussions, and gave them great force by their practical illustrations and statement of experiences.

This single point accomplished, and no other benefits derived from the gathering, would have been one of signal success. Our interest is usually in matters in which we are personally engaged. We may listen attentively to the eloquent teachings of others, and be gratified and instructed, and bear away in the memory many pleasing and useful facts, but they have little weight compared with what they would have, were we in turn, to enter the lists ourselves, express our own views and press their truthfulness and importance upon others. This is what will excite new thought, enliven the imagination and fit the mind to be impressed by facts presented to it.

Many a man has returned to his home from these winter meetings with the consciousness that he possesses powers unknown to himself before, and this consciousness elevates him in his own estimation, as well as in that of his friends. They are, to him, *new* powers. Of what use would the most important thought be to the world, if there were no power of expressing it, or the most ingenious device for saving labor, building houses, or ships, or railroads, or anything else? We have no doubt that the late meeting at Manchester will be worth more than the gift of $50,000 in gold deposited with the Treasurer of the State.

The meeting of the Maine State Board of Agriculture, at Augusta, last winter, that at Bangor in the autumn, and the recent meeting at Lewiston, are all of the same character, and will have an immense influence upon agricultural interests.

At Lewiston it was pleasant to observe how every department of the farm found some able advocate, and how thoroughly many theories had been tested, and were approved or condemned. For two or three years past occasional paragraphs have appeared in the papers, stating that grass which is merely wilted may be housed and preserved in good condition, and that, so cured, it retains its *grass qualities*, and is some ten to twenty-five per cent. better than when cured in the old way.

It was not generally supposed that this new process had been thoroughly tested by any New England farmer, or that the practice would ever become general. But in the meeting at Lewiston, a dozen persons expressed their belief that this process was the *true one*, and stated their experiences in curing grass in this way. Some of them had been in the practice of curing their grass so for years. One of them Capt. Taylor, of Winthrop, as may be seen by our report of the meeting, gave minute details of his hay-making for ten years in succession, and after all this experience, stated that grass cured by wilting only, and then stowed in large quantities in tight barns, is worth twenty five per cent. more than grass made into hay in the old way.

In a similar manner the modes of managing several other crops passed under review, and old and new practices were compared, and approved or condemned according to the convictions of the speaker.

We trust these meetings will be continued. They have not yet reached the class that needs their influences most. Progressive men, those who make the same number of acres support one more animal each succeeding year, who

read books and newspapers which treat of their profession and are proud of their calling, have made up most of the audiences so far. The good influence of these winter meetings must be extended, until the most indifferent now, shall become among the most zealous.

NEW PUBLICATIONS.

SEVENTH ANNUAL REPORT of the Trustees of the Massachusetts Agricultural College, January, 1870.

To an encouraging and hopeful review of the past years' operations of this institution, are added a Catalogue of Trustees, Overseers, Faculty and Students, the Course of Study and Instruction, Financial Statement, &c. The Junior class numbers 35, the Sophomore 41, the Freshman 24, Select Class 19; total 119. While it is regarded as desirable that the students should go through the regular four years' course of study, provision is made for the instruction of those who are unable to do so, in any of the studies for which they are qualified, during a single term or longer, as they please. We think this is a very important feature in the college. To a great number of farmers' boys the college thus becomes practically an academy or high school. Here one can spend the winter months, or any other time at his command, and enjoy the advantages of the apparatus, the professors, the lecturers, &c., which the institution affords, and thus with little expense of money or time, may have put into his hands the "key to the door of knowledge," which President Clark says in his report is the great object of all instruction in the college; or at least may get the key to the door of some particular branch of knowledge. If a young man wishes for the key to the door of chemistry, Dr. Goessmann will review his lessons and illustrate the principles of the science in the college laboratory; if he would open the door that leads to a knowledge of the diseases of domestic animals, Prof. Law will direct and aid his studies by all the appliances enjoyed by those who pursue the regular course; if he wants instruction in Botany, President Clark himself offers his services as instructor, with the use of an extensive herbarium and of the Durfee plant-house, with about one thousand live and growing specimens; and the same may be said to those who desire to make a specialty of any other science embraced in the regular course.

The students of the regular classes are required to work six hours a week without compensation, and are allowed to work, at ten to twenty cents an hour, as much as they please, provided their studies are not neglected.

Among the results of ordinary operations on the college farm of 384 acres, during the past year, President Clark mentions the laying down to grass of about fifteen acres, the hay crop of one hundred and fifty tons, seven hundred and fifty bushels of corn, six hundred of oats, and six hundred of potatoes. The College now owns good specimens of the four principal breeds of cattle. The *Shorthorns* are represented by a bull, Mountain Lad, bred by Augustus Whitman, of Fitchburg; a cow, Young Acacia, bred by G. Munson, of Huntington; a heifer, Yarico 57th, from the herd of Paoli Lathrop, of South Hadley; and another, Autumn Rose, from that of Phineas Stedman, of Chicopee. The *Devons* are from the stock of E. H. Hyde, of Stafford, Conn., and consist of a bull, General Lyon, and two cows, Gem 3d and Winona 2d. The *Ayrshires* are a bull, Colfax, bred by H. S. Collins, of Collinsville, Conn.; and a heifer, Lulie, bred by H. F. Hills, of Amherst. The *Jerseys* consist of a bull, Essex, from the herd of Charles G. Loring, of Boston; a bull calf, Enterprise, bred by James Thompson, of Nantucket; and a cow, Lucy, from the stock of Henry Cobb, of Amherst. Besides the above-named, thoroughbred animals, the College has about forty natives, mostly cows, and steers designed for slaughter. There are also upon the farm twenty-five fine Southdown sheep, from the stock of Thomas Buffum, of Newport, R. I., and twenty-four swine of the Suffolk, Berkshire and Chester County breeds. The teams consist of two pairs of oxen and five horses.

Much other work has been done in underdraining, road-making, planting trees, vines, &c.

Students pay term-bills to the amount of $54 per annum, and the absolute necessary cost of a residence at the institution for a year, aside from clothing, it is stated, will not exceed $250.

THE AMERICAN HERD BOOK, containing Pedigrees of Short-horned Cattle, with Introductory Notes, by Lewis F. Allen. Vol. IX. Part I.—Bulls; Part II.—Cows. Buffalo: Warren, Johnson & Co. 1870.

The disposition that has been manifested by agricultural societies to confine their premiums for thoroughbred stock to animals with a herd-book pedigree, and the superior price which such animals command, will undoubtedly excite a greater interest in herd-books than has heretofore been manifested by cattle breeders. The present volume contains about 5386 pedigrees, a much larger number than any previous volume, and about the same as that of the last volume of the English Herd-book. American Short-horn breeders are congratulated on the increasing popularity and profitableness of their herds, and Mr. Allen says, "It has been conclusively ascertained that our American breeders have fully maintained, if not improved the quality of their stock over those of the same tribes and strains of blood retained in England. Some of the most eminent among English breeders have, in several instances, sent to America for Animals descended from some of their own choice tribes, years ago imported here, with which to re invigorate the blood of their native herds. Such facts settle the question, not only of the adaptability of our country to the increase and thrift of the cattle themselves, but that our American breeders possess the skill and ability to develope them in all the nobility and excel-

lence of which their race is susceptible. So well established have become their merits in all parts of our country where good grasses abound, that no hesitation is now indulged by those who want the best breed of cattle for general purposes, to select the Short-horn as fitted for their uses. The future demand for them, as our broad Western country increases in settlement and cultivation, must be almost illimitable. Never were the prospects for their sale so promising as now."

THE AMERICAN BOTANIST AND FLORIST: including Lessons in the Structure, Life, and Growth of Plants; together with a Simple Analytical Flora, descriptive of the Native and Cultivated Plants growing in the Atlantic division of the American Union. By Alphonso Wood, A. M., Author of the Class book of Botany, &c. A. S. Barnes & Co. New York and Chicago. 1870. 564 pages, price $2.50, post paid.

Our acquaintance with the author's Class Book of Botany, and a personal knowledge of his industry and devotion to his favorite science, have prepared us for a favorable opinion of the more elaborate volume, of which the above is the title-page. By avoiding repetitions and otherwise economizing space, it was his purpose in preparing this work to furnish the student in botany with a complete manual within the compass of an ordinary duodecimo volume. Nearly 4000 species of plants are defined, and the text is illustrated by a large number of cuts. The volume is supplied with Latin and English indexes, glossary, &c.

For the New England Farmer.

"TERRITORIAL EXPANSION."

The time has come when such books as "Ten Acres Enough" seem to be considered all "bosh," and we see the notice of a books taking off the absurdities of such writers, entitled "Five Acres Too Much."

While the impracticability of the teachings of these writers is evident, the impracticability of making it profitable to cultivate so much land as we do, in the manner we do, is still more apparent. Another fact is also apparent, —that an entire change in our farm operations is required to make farming a respectable business, when farms are offered at less than their buildings are worth, and that upon a glutted farm market; while about every boy who "knows enough to go in when it rains," leaves the worn-out ancestral acres for some mercantile, mechanical, or professional calling.

I have just been reading a suggestive article from an 1866 FARMER. I can't tell the exact date, as the article was cut out. It is entitled "Farming on a Small Scale," by which the author, "P. C. S.," East Bethel, Vt., evidently meant cultivating a small surface; as I judge the profits were larger than most of our "large farmers" can obtain. "P. C. S." did not give his neighbor's name, as that modest individual preferred hiding his light under a bushel. But here is what he says: "His farm consists of only seven acres, yet the produce of that seven acres" (he says nothing about pasturing) "last winter, carried through, in the best manner, forty sheep, two cows, one horse, and he thinks he had hay enough left to have wintered two cows more. This winter he has fifty-two sheep, one horse, one cow, and one yearling, while one acre of his land was laid down to grass so late this spring, that it produced nothing, no grain being sown." And he goes on with some of the details of his management. (Wouldn't it be well to republish that article, Messrs. Editors?) And wouldn't it be well to hear from you, *now*, Mr. "P. C. S?" "Such farmers," says "Remarks," "are the pride of New England."

In the September No. of the *Atlantic Monthly*, in an article entitled "Confucius and the Chinese," the author, probably Mr. C. C. Coffin, says: "Farms are small, of one or two acres; and each family raises on its farm all it consumes." In regard to the strict correctness of all these statements, doubts may be entertained by some; and no one wishes the people of this country to come down to the Chinese standard of living. Still, in the main, these statements are doubtless correct, and it requires something to live, even in China; and instances can be pointed out in every town, where immense crops are raised from a small farm, with more profit than is obtained from much larger ones.

However, the question is not altogether "what size shall a farm be," but rather "to how high a state of fertilization and cultivation should a farm be carried?" One man may be able to carry on advantageously a hundred times more business than another; and one piece of land may have a soil which will make a higher state of cultivation more profitable than another. A very leachy soil may, in some cases, be manured less heavily than a more retentive one, for the good reason that the fertilizing properties contained in the former are more likely to be carried below the reach of plant roots. Such soils may be manured lightly and often, and medium crops obtained with greater profit, than by the process of very heavy manuring, and larger crops. At the same time most of our cultivated soils may be made to produce very heavily, with more profit from an acre with a double crop, than from two with a single one.

Now, suppose I have a three acre lot, the soil being alike throughout, *naturally*; and with a full average capacity for the production of grass. Supposing the lot to be equally divided into three parts, we will say that one of the acres yields two tons of hay, while each of the other two, yields only one ton; that is, two tons to both. Meanwhile the proportion of the different elements contained in the fertilizing materials used is the same, and such as to fit the soil for the growth of grass, and also to produce a permanent fertility of the soil—not like some of our concentrated manures, which cause the production of a few immense crops, to the injury of the land.

Then, suppose I cultivate the soil of the different parts of the whole field for a long term of years, maintaining each part in its present state of productiveness, annually taking my two tons of hay from the best one acre, and the same from the other two; which, I ask, would yield the most net profit; the one acre yielding the heavy crop, or the other two, bearing only an equal amount.

The two acres, as they stand, may, indeed, be of more value than the one acre; as each of them may, perhaps, be brought up to the standard of the other at a cost which will leave a profit sufficient to make them so; but this does not interfere with the application of the principle.

The one acre requires less cost for fencing. The toughness of the sward, may, indeed, make it harder to plough, *according to its size;* but the whole expense is less. The securing of the two tons from the one acre, is at less cost than from the two acres. The amount of seed required is less, for *the same surface*, even, of the most fertile soil, and the cost of sowing proportionately small. Then there is the saving in removing stones, and, in fact, a saving in about every one of the details connected with the business. If we were, however, to come to the false conclusion that the profits of the two parts of this field were alike, we should then want to know what were the costs of the two, including that of purchase, and of cultivation, up to the time of getting them into their present state.

The cost of land, and of seed, and the labor of going through all the details except the application of manure, would be less on the single acre. The amount of manure and its cost would be greater. We think the difference, on the whole, would be small, in an average of cases.

But it is not always practicable to buy just such a farm as we want, and we sometimes inherit, or somehow get a few barren acres, which may be so mixed up with the good as not to be easily separated, while a mortgage and other incumbrances may hinder our prosperity.

If, with all these, a not very hardy physical constitution is ours, we may be led to study economy as it relates to the saving of labor, and the getting of a fair remuneration for the capital—time is money—expended on the soil. And we may conclude that millions of acres in New England are pastured, and otherwise cultivated, at a loss. Also that it is better to let much of our poorest land grow up to wood, and thus get a sure, though a slow profit, while time, labor and manure, are concentrated in the higher cultivation of the better part.

The same general principles may be applied to the keeping of stock. Much of our poor stock should be rejected and the rest kept better. A man may feed a cow just enough to keep the breath of life in her, without getting anything from her, or in any way increasing her value. Up to this point, we all feed our cows at a dead loss. Beyond it, if fed properly, we feed to a profit, if there is any profit anywhere! What stock you keep, keep well, and keep no more than you can so keep.

You may cultivate a piece of ground just enough to get crops which will barely pay you for all the capital you invest on it. All below this point is a dead loss. If anywhere, the net profit is in cultivating your soil to a higher degree. As your means increase, increase your stock as you can, and keep it well. The same rule applies to cultivated land.

There are thousands of farmers, who, had they bought small instead of large farms, and kept their encumbrances reduced, and also kept a small number of cattle, and made the best of what they had, would have made larger net profits, and been richer men, while they and their families would have had more time for recreation and for mental improvement, and been blessed with more of the comforts of life; and their sons would not have abandoned the farm for easier and more profitable employment.

Another thing to be considered is, the better quality of crops where grown luxuriantly. John Johnston, the great western New York farmer, is reported as having said that the same weight of hay from luxuriant grass is more valuable than that of a light growth. And I think reason teaches the truth of this doctrine. Of course, luxuriant, heavy crops must be cut when young, fine and tender, so that the hay will be succulent and digestible, and before the sugar and starch made up from the carbon of the plant have become changed to woody fibre. The crops from a grass field may be often taken off at two cuttings instead of one, to a much greater advantage. Our grain crops are also of better quality from soil well enriched with organic plant food, and not too much strongly ammoniated manure, which sometimes, as in the case of wheat, tends more to the production of straw than of seed.

The same may be said of potatoes. Mineral manures like ashes, plaster, salt, bone, &c., do not cause them to rot. Probably Prof. Ville's statement, that a lack of phosphate of lime, and of potash, and too much nitrogen, caused the rotting of potatoes, is about correct. An extensive use of absorbents under our cattle, which no good farmer neglects, is a great economizer of fertilizing material, and a partial correcter of these evils.

So we see judicious, as well as high manuring is required. Another disadvantage of poor manuring is, we have small potatoes, and other refuse crops, which are worth far less by the quantity than the larger and better productions of highly fertilized soils.

Meanwhile, in the cultivation of our soils to the greatest advantage, and in the equalization of our crops for the various purposes of

summer and of winter feed, the practice of the soiling of cattle comes in, to a greater or less degree. Many of us can winter more stock than we can pasture. It is not necessary to soil wholly to correct this evil, or to hire pasturing in order to use up our winter feed at home; but our cows can be fed in the stall, and their manure saved during a part of each day, in summer. The summer manure is of more value than that made during other season of the year. There are many farmers in this region who have good soils near their buildings, neglected and profitless, who drive their cattle to and from distant pastures daily, where the feed is poor both in quantity and quality.

No wonder the boys leave the farm, and that it is finally sold at less than the buildings are worth. No wonder that such a system of farming has made many an honest, hard working, temperate, frugal family, to live in poverty all their days.

O, that we could honor our father and mother that our days might be long in the land which the Lord our God giveth us, and at the same time not feel that we were desecrating their memory by improving our system of agriculture, as mechanics have improved the various arts.

Why is it that the farmer is so conservative? Let us take the stone out of the bag.

From one who has had sad experience, and is trying to improve, without leaving the farm.

Franklin, Mass., 1870. R. A.

SOME OTHER BUSINESS OR PLACE.

Of all the men who till the soil, the man who don't expect to farm it long, is by far the poorest specimen. His fences are down, his freaky cattle run at large; while the seeds of his foul weeds are blowing over all his neighbors' fields. He is always ready to borrow farming tools, but never ready to return them. His place is an eyesore in the neighborhood, and his example is to be dreaded by every thrifty farmer who has sons. A sailor who engages in a mutiny at sea is not more to be feared by his associates, than is such a man. Half a dozen such men in a neighborhood will do much to demoralize a whole community of farmers.

Next to the man who don't expect to farm it long, the man who expects soon to change his location is the poorest farmer that we know. He is likely to let everything go to rack and ruin. He has got his mind fixed on a location where crops grow with little or no labor being bestowed on them, and thinks to till fields on which an enemy has sowed no tares. He can't be expected to trim fruit trees, or to fuss with grape vines, when some one else is to eat the fruit that is to grow thereon. He expects to be a farmer all his days, perhaps, but he is tired of his present location, and counts all the labor spent in making lasting improvements on his farm as so much labor spent in vain. He is not ashamed of farming, but his faith in it points to fairer skies, richer soils, and broader fields than those he has been accustomed to.—*Prairie Farmer.*

For the New England Farmer.

THE SNOW FLAKE.

BY ISAAC W. SANBORN.

O'er the meadow and the hill-side,
On the mountain and the plain,
Lightly falls the fleecy snow-flake,
Falls to rise from Earth again.

Happy in its stainless virtue,
Crystal wanderer, clad with grace;
Having for its steed the North-wind,
Searching every idle place,—

Every place in the dominion
Of the Frost-king and his reign,
Where the mighty lakes and rivers
Grope beneath his icy chain.

There in numbers vast and countless,
Thousands, millions, by the way;
Clothing Earth in spotless beauty,
Gathered hosts of snow-flakes lay,—

Lay a blessing to the Earth-world,
Shielding it from Winter's sting,
Till the march of Time advancing,
Ushers in the reign of Spring.

FATTENING CATTLE.

Mr. Bela S. Hastings, whose name is familiar to the readers of our Cattle Market Reports, as one of the leading drovers from Vermont, gave his experience and observation in relation to fattening stock at a late meeting of the Caledonia County Farmers' Club:—

He said the main object of the farmer was to get the most out of his fodder. It does not pay to feed grain to a poor creature, one that does not take on flesh rapidly. Farmers will do better to dispose of such stock for what it will bring, and procure animals of good style. He believed that one-half of the grain fed was wasted by not being fed to good cattle. Another important point is, farmers do not feed heavy enough. He would commence with as much feed as they could bear at first, and then increase. In feeding twelve quarts of meal, the last four quarts are worth twice as much as the first four for fattening purposes. Some farmers complain that they do not get pay for the grain they feed out, but he had noticed that it was only those who fed light that thus complained. Whether the animal was to be fed a short or a long time, he would recommend heavy feeding.

Mr. Hastings said he knew of nothing better than corn meal. The cob is worth but little, if anything. Those persons of whom he

purchased fat stock, who were the most successful and made it most profitable, were those who fed meal largely. If a farmer has potatoes or other roots it is well enough to feed these in part, but a farmer will do better to exchange some of his roots for corn, than to feed roots altogether. It is important to feed regularly and not too often, as the stock will eat and lie down and ruminate. It is better to feed cattle but three times a day, and sheep but once.

MILLET.

The *Rural New Yorker* gives the following statement by Mr. Whitman at a meeting of the Herkimer County, New York Farmers' Club:—

Millet may be sown in June, after the time for planting corn, or, indeed, that for any other crop except buckwheat. It produces an excellent yield, both of stalk and grain, and cattle like it better than hay. The seed is particularly relished by fowls, and it was a profitable crop to grow for this purpose alone. He said we have occasion many times to break up lands late in the season. Corn and other grain crops are not unfrequently destroyed at a time when it would be too late to re-plant. In such cases millet could be used as a late crop with the best results. He found the average yield to be at the rate of twenty to twenty-five bushels of seed to the acre, and one and a half tons of straw, after the seed was taken out.

He always made a point of cutting millet while the stalk is green, and when harvested in this way cattle prefer it to hay. It grows to a good height, reaching to the shoulder, and may be cradled and bound like grain. Mr. W. said he had not been very particular in taking all the seed from the straw; he did not care to do that. His usual course was to throw the bundles on the floor, beating out the seed that would shell readily with the flail. The straw, with the remaining seed, was then fed to his cows, and it produced the very best results. In feeding millet to domestic animals he had not found it objectionable in any case except when used for horses. The seed was too rich and oily for this purpose, and, as he thought, was the occasion of horses passing too much urine.

COMFORTABLE STALLS FOR CATTLE.—One of the most disagreeable chores a farmer boy has to do is to sit down to milk a stable cow. He feels cross and so does the animal, and the consequence is he does not get a full flow of milk, and she is gradually dried up.

To make your cow stable comfortable, pin down a two inch plank where their hind feet stand, putting an inch strip under the edge of it towards the cow's head so as to give it an inclination towards the aisle or walk. Now fill the space from this plank to the forward part of the stall with sawdust or some similar material to a depth of about four inches—a level with the upper edge of the plank. By this arrangement the excrements and urine are mostly dropped behind the plank in the walk, leaving a high, dry and warm bed for the animal. It is as easy for her feet as though she stood upon the sod of mother earth—as warm a bed as down to a human being.

I have had the fixtures in use about a month, and to-day the hams and flanks of my cows and calves are as clean and dry as in the summer. About once a week there needs an addition of sawdust to the bed. Just the comfortable looks of the cattle in an evening when they are reposing upon their comfortable bed is worth many times the cost of the fixture.—*W. H. Canfield, in Western Farmer.*

PRESERVING BEEF.—Mr. Foster of Madison county, writes to the New York Farmers' Club, that in the first place he puts the beef in weak brine and soaks all the blood out of it, letting it remain therein a week or ten days. then for one hundred pounds of meat he prepares a brine of nine pounds of salt, two pounds of sugar, two ounces saltpeter, two ounces black pepper and six gallons of water. Boils and skims this and pours it hot upon the meat after it is packed in the barrel. In the spring he draws the brine from the barrel by tapping it at the base, scalds and skims it, adds a little salt and pours it on the meat again while hot; and he has no difficulty in keeping the beef nicely the balance of the season. If at any time the brine should begin to smell bad, it should be drawn off, scalded and skimmed as before, and returned. Dr Hexamer had used the same receipt for many years with the exception of the black pepper, which he did not regard as essential to preserve the meat. If more salt was used than the amount specified it made the beef hard; but the receipt would save beef perfectly.

GOOD TEAMS.—As a general thing, the teams of the farmers in Northern Ohio are too light. Mechanics, in selecting their power, act wiser than farmers, for when they buy an engine, care is taken to get one heavy enough to do their business thoroughly; but too often the farmer buys a cheap, light team that is not capable of performing one-half of the necessary labor, and the result is, that he gets into the habit—which is indeed a matter of necessity—of gauging the depth of his furrow by the strength of his team, and as a result he impoverishes his farm, and realizes small crops, and finally becomes discouraged and tries some other business. There is hardly any labor performed upon the farm with a team but that the farmer would realize the superior advantages of a large muscular team. I admit it will require more to keep such a

team than to feed a light fancy span, but the advantage gained in the increase of grain grown from thorough ploughing, and the time saved in dispatching other work, will make up the difference in feed many times over in a single season.—*Ohio Farmer.*

EXTRACTS AND REPLIES.

FOOT ROT IN SHEEP.

I notice in the FARMER of the 22d inst., that a brother wool grower, Mr. A. G. Noyes, of Lancaster, N. H., seems disposed to criticise the manner of treating foot rot, as recommended by myself in a late communication to your paper. He thinks I insist upon "precision" and "eternal vigilance" to a degree not practicable in flocks of 100 sheep or more—admitting that it might do in a small lot of a dozen "fancy" sheep.

That admission is all I could ask. If the method is practicable for a dozen sheep, why is it not for any larger number? I was driven to that "precision" in treatment by a dozen failures, such as all men have experienced who have attempted to rid their flocks of this disease. I found I was consuming a great amount of time, and experiencing no small amount of labor, in going over the flock in a superficial manner, many times, and still the job was not done. I left virus enough for seed each time, and a good crop of sore feet was sure to follow in due season. We all know men, I doubt not, who keep foot rot in their flocks from year to year, and never get rid of it. The general practice with such men is to "doctor" the sheep every rainy day, *when it is convenient*, "in the old-fashioned," "diabolical" way, and so the trouble remains. Now I wish to assure my friend Noyes, that the method I have proposed is as effectual for a large number as for a small one. He asks,—"But how is it in flocks of one to five hundred?" I cannot say how it would operate with five hundred; but I do know that with *four* hundred it will work like a charm. I have personally applied that "eternal vigilance" to that number, but I never went any higher.

And more than this, I can assure any man that I found less "back aching" in this method of treatment than in the old half-and-half way of going about it.

Let any man say which involves the most labor, to go over one hundred sheep as I have recommended *twice* and cure them, or to go over them eight or ten times carelessly and at uncertain intervals, and leave them in the end no better than when first taken in hand. One word in regard to the method recommended by Mr. Noyes. I think it a good one. The greatest objection I see to it is, that it is not adapted to winter use,—when the disease is apt to be the most persistent.

I would like to inquire of Mr. Noyes, why, if he depended as much upon the "brine" as upon the "solution of vitriol"—he did not depend altogether upon the brine? And once more, If he has "faith in the curative qualities of tobacco," will he tell us *in what* those curative qualities consist?

HENRY BOYNTON.

Woodstock, Vt., Jan. 29, 1870.

WHEAT CULTURE—COMPOST FOR WHEAT.

In my article of August 21, 1869, on Wheat Culture, I promised to give your readers my mode of cultivation. It may be proper for me to remark, in the first place, that I am but a small, or as some say, a one-horse farmer, having only about 85 acres of land, all told. I have raised from five to ten acres of wheat yearly. I sometimes sow winter wheat, after corn, if the corn gets ripe, so that I can get in the wheat before the 15th of September; and if the ground is in a good state of cultivation, sufficient to raise 50 bushels of shelled corn to the acre, I will get 25 bushels of wheat on an average. Still I have had the best success with turf ground, or inverted sod. Say, take a piece of mowing ground that will not cut more than 1500 pounds of hay to the acre, turn it over as smooth as possible during lowry weather, in haying and harvesting, not ploughing over six or seven inches deep at most; then roll it before putting on the harrow, so as not to disturb the sods; then harrow until it is mellow; let it lay until about the 20th of August, and spread five or six cords of fine manure to the acre, if I have it. But if I have not the manure, I take fifteen bushels of wood ashes, five bushels of slaked lime, 300 pounds plaster, and three bushels salt, put it all in a cart, and mix by shoveling over. This makes the best compost or fertilizer that I have ever used for wheat. The above quantities are sufficient for an acre, and I think it is as good for the wheat as the five or six cords of manure, on my land, and the grass is as good where the compost is used as it is where I put the manure. After spreading on the manure, or compost, and harrowing twice in a place, I sow two bushels of wheat, that has been soaked two hours in a strong brine, and dried off, with half a bushel of lime to the acre. I then harrow and cross harrow twice in a place, each way; after which I sow my grass seed and harrow once in a place lengthways of the furrow, then bush with a light bush, and finish by rolling smooth, and in nine years have not had but one crop fail. About one-half of my land is a clay loam, and the other part a slate gravel.

I have ten acres of winter wheat in the ground now, the most of it on turf ground, sowed in August. The growth last fall was very heavy, but it has been a bad, open winter, thus far, for winter grain, in old Vermont.

NORWAY OATS.

I sowed in the spring of 1868 three bushels of Norway oats on two acres of very rich ground, and got 43½ bushels that weighed twenty-seven pounds to the bushel. I sold to Mr. Ramsdell at $1.25 per bushel. If I had sowed that same ground to wheat I should have got more bushels, and could have sold the wheat at $2.50 per bushel.

EARLY ROSE POTATOES.

I planted May 14th twelve ounces of seed, making seventeen hills of three eyes each, and dug September 14th, ninety-four pounds nice mealy handsome potatoes; but I think that they will improve by planting, like all other seedlings, until they have been planted ten or twelve years, for it takes from eight to twelve years for potatoes started from seed balls to arrive to full maturity.

Hartford, Vt., Jan. 25, 1870. R. H. SIMONDS.

CASE OF ABORTION WITH COW.

Nearly five weeks since, I butchered three hogs in my barn yard; also, a beef in the barn. I had one cow to calve next April. The following morning she lost a calf. On the third morning another calf, making two calves. Was the scent of blood the cause? I have slaughtered hogs and cattle many times in the presence of cows in calf, but have never known any such results before.

EARLY RISING HENS.

I have ten hens, all in laying order. Six out of the ten invariably go to their nests before daylight in the morning,—usually between half past five and six o'clock,—leaving their nests as soon

as daylight comes, with an extra egg therein. They are Brahma fowls.

OUR WINTER.

The winter with us has been remarkably warm. Not one day of good sledding up to this date, though we have had several falls of snow of two or three inches at a time, followed by big rains. Hard for wood drawers. We use wagons, carts, sleds and sleighs all the same day. Unbanked cellars do not freeze. At this writing it is snowing smartly.

PRICES OF PRODUCE.

Hay $12 and $15 per ton; corn $1.25 and $1.30; wheat $1.50 and $1.75; potatoes 50 cents per bush.; butter 35 and 45 cents per pound; cheese, retail, 20 cts. per pound; eggs 30 cents per dozen; pork 12 and 14, beef 8 and 10 cents by the side; wood, hard, $6 per cord. Business easy; trade very cautious.

H. N. SAVAGE.

White River Junction, Vt., Jan. 30, 1870.

REMARKS.—The legislature of the State of New York has expended large sums of money in the investigation, by the most competent men, of the causes of abortion in cows, but thus far without any very satisfactory results. For some mysterious reason, cows seem to have been of late, in certain localities, at least, predisposed to this disease. Your cows may have been thus predisposed, and hence the consequences of slaughtering animals in the barnyard were different this year from those of previous years when your cows were healthy. It is considered very dangerous to subject cows with calf to the sight and smell of slaughtered animals. Their sense of smell is very acute, and the presence of fresh blood often greatly excites them, and is frequently the immediate cause of abortion.

THE JOHN MORRILL HORSE.

Will some reader of the FARMER give me the particulars in relation to this horse which is or has been owned in the northern part or Vermont. I would like to know his pedigree, color, weight, and general character as a horse. Such information will greatly oblige a great lover of a good horse. I have often wondered while reading the FARMER that more is not written of this noble animal. Excepting the members of one's own family, what is there on earth in which man has so much interest as the horse,—ever ready to do his bidding in sickness or health, in business or pleasure. And yet how often is he poorly fed and poorly cared for by his owner. A READER.

Dummerston, Vt., Feb. 4, 1870.

REMARKS.—We cannot furnish the desired information, but hope some correspondent will do so. We may, however, say that the Morrills belong to a branch of the Vermont Morgans; being the descendants of Bulrush Morgan, one of the three most celebrated colts of the original Justin Morgan. Among the Morrills, two horses known as Old and Young Morrill were the most celebrated. According to the pedigree given in Stonehenge, McClure and Harvey on the Horse, Old Morrill had two crosses of Diomed and four of Messenger, and Young Morrill had two lines of descent from Justin Morrill on his dam's side. Young Morrill is sire of Draco, Fearnaught, Danville Boy, Mountain Maid, Hiram Woodruff, &c.

A SUCCESSFUL FARMER.

When a man has achieved success in any business, profession or occupation, we naturally turn to him and inquire, How was success obtained? What course was pursued, what system followed? A recent visit to the milk farm of Mr. M. N. Bruce of Acton, Mass., furnished ample proof that he had been successful. His farm, of about 200 acres, is situated three-fourths of a mile from the station, on the Fitchburg railroad, with a pasture of sixty acres about one mile from the homestead, where his dry cows and young stock are kept.

His stock at present consists of twenty-four milch cows, twenty-two head of young cattle, one yoke of oxen and two horses. He devotes the whole produce of the farm to milk raising, and has made it a specialty since 1845. He now makes about twenty-four cans per day. He feeds about twelve tons of grain, besides what he raises upon the farm, and thinks wheat middlings the best feed for the health of his milch cows. He raises five or six calves yearly. He believes grade Ayrshires the best cows for milk, and has recently purchased of Geo. M. Barrett, of Concord, Mass., a full blood Ayrshire bull.

In 1852 Mr. Bruce built a new barn 40x100 feet and connected it by a shed and granary, 40 feet in length, to the house, which he has recently completely renovated. He has commodious and convenient buildings, which, together with the barn cellar, are furnished with water by an aqueduct.

Mr. Bruce has reclaimed ten acres of swamp meadow on which he cuts a large crop of English hay; has completely renovated fifty acres of shrub oaks and whortleberries into rich and succulent pasture, and has laid new and relaid old stone wall to the amount of 500 rods. All these and other improvements he has accomplished since 1840, at which time he purchased the farm which was then very much run out; the buildings being old and poor, the fences much dilapidated, and the farm then would barely keep six cows.

The capital which Mr. Bruce had at 21 years of age, was industry, honesty, economy and a strong will. With this capital he grappled with the farm as it then was, and now he is owner of the farm and stock as it now is, with something laid by for contingencies.

Mr. Bruce attributes his success to making one branch of farming a specialty and to a judicious application of the capital he started with.

Littleton, Mass., Jan. 25, 1870. S.

A WEEPING CALF.—ALSIKE CLOVER.

I have a last spring's calf that weeps constantly and has done so for two months. What can be done for it?

I wish to procure some alsike clover seed. Who has it for sale? W. F. JONES.

Worthington, Mass., Jan. 20, 1870.

REMARKS.—Weeping may proceed from disease, injury, or some foreign substance in the eye; but from the description given we have no clew to the cause in this case.

The alsike clover seed is for sale at the agricultural seed stores at about fifty cents per pound.

OUR POTATOES.

We raised this year the Early Rose, and a nicer, sweeter potato never grew; Early Goodrich which sold well; Harrison, which also sold well, but which we *dislike* very much, on account of its strong taste; Davis' Seedling, which yielded well and sold well, but which we also dislike for the same reason; the Gleason, which is in every respect a splendid potato, great yielder, large size, —no small ones to speak of,—rough skin, shallow

eyes, mealy, sweet, delicious, and ranks next to the Early Rose in every respect; and the New York Peach Blow, which is very nice,—some call it better than the Gleason.

How different the public taste is now in regard to potatoes, from what it was twenty years ago A potato, then, was a potato, and nothing more. Now they are prized according to their goodness; poor or even common ones, are discarded, and those nearest perfection chosen. S. B. S.

West Amesbury, Mass., Feb. 7, 1870.

WASHINGTON OATS.

I have an oat that came from Washington, where the big men go to get wisdom; and whence seeds of different kinds are scattered through our land, some of which prove to be good. The kind that I have will weigh forty pounds to the bushel, and ripens a week earlier than the common variety. I think it will be a good kind to grow where they are apt to rust. Mine grew some five and a half feet tall, stood up well to cradle, with long heads, stout straw, a plump berry, not crotched like the common oats. I send you a sample of a number of bushels that I raised.

A VENERABLE PUMPKIN.

I have a pumpkin that was raised in the year 1868, that is about as fresh looking as it was the fall that it was taken from the vine. I think it was the largest one I raised. I kept it where it would not freeze in the winter, out of the cellar, and in the milk room in the summer. It bids fair to winter again.

LAYING HENS.

I have twenty-five old hens and pullets from which I sold eggs in December and January to the amount of twelve dollars and sixty-six cents, besides using a few new ones, though we saved eggs that were laid in the fall. I sold at from twenty-five to forty cents a dozen. I feed the hens sand, gravel, ashes, burnt bones, scraps and dry mortar, with messes of potato and crumbs from the table, some oats, plenty of India and buckwheat, with some corn that did not get ripe. I keep feed by them all the time, and give them water and sour milk. I have a room in one corner the horse shed, with a window for the hens to look out and the sun to look in. Here they lay and set, with a roost one side. Their droppings are saved and I have a large load of it now which will be good to put on the grass next spring, and perhaps some on corn and potatoes. We have less than a foot of snow on the ground now, with cold weather and good sledding, though we have had but little before this winter. H. Griffin.

Essex Junction, Vt., Feb. 3, 1870.

SEASONABLE CARE OF COWS.

The time is now at hand when farmers should be thinking about their cows that are coming in. To have them do well, I say feed them with good hay, but not too much; give them potatoes, turnips, carrots or beets, twice a week, with a little meal once a day, and keep them loose, warm and dry. When they drop their calves, if they do not clean well, send for some one to take it away. In bad cases it will create inflammation in twelve hours. Take a cloth or anything you please and pull lightly and cut it off, and it will disappear and pass off without any injury to the cow. Such has been my experience for fifty years. In the course of that time I have been called on to assist in more than a hundred cases, and in only one did the cow fail of doing well, and that was when I took it away, resulting in inflammation, loss of flesh and failure in her milk. I resolved then that I would assist, but never attempt to force nature. If the Lord will, I may at a future time give directions how to manage in case a cow or mare is unable to drop its young, with a description of an instrument with which one man can do more than ten can without it.

Brookfield, Vt., Feb., 1870. V. Baker.

BUTTERMILK AND PIGS.

Will buttermilk cause a sow to cast her pigs? I have been told so by a farmer. W. B.

Cohasset, Mass., 1870.

Remarks.—We do not think that buttermilk, or any other food usually given to swine, and in moderate quantities, will cause a sow to cast her pigs. The danger is, that breeding sows do not get a sufficient *variety* of food. During the whole time of gestation *three* things ought to be carefully observed; and when they have been we have never known a sow to cast her young. First, access to the ground, and sufficient space to root about in it. Second, some kind of animal food, at least once each week, such as butcher's scraps, bits of fresh meat of any kind, with a little salt in the swill; and Thirdly, a dry and roomy bed.

When these conditions are observed, the sow will do well.

CORN FODDER.

If the statement of Dr. Loring be correct, what shall I plant for fodder? W. B.

Remarks.—We do not know. In the town where we reside, some fifteen hundred gallons of milk are sent to Boston every morning. Take away the corn fodder, and that flow milk of would nearly cease for two or more months. Nothing has yet been found to take its place. Fed on it, the cows continue their flow of milk, and keep in good condition during the trying time in August, September and part of October, when the pastures have nearly failed.

NORWAY OATS.

Please let me know where the *Norway* oats came from? Are they what the Downeasters call the Maine oats, or the Poland or Norway oats of Europe?" W. B.

Remarks.—The Norway oat is said to have been found in a package of Norway peas, distributed by the United States Patent office; but we believe that the name is claimed simply as a "trade mark," and not to indicate its origin.

Last summer, we took especial pains to visit several fields which had crops upon them of Norway oats. The growth was remarkable in several respects. The average height of the plants we thought would be nearly or quite *four* feet; the stalks were much larger than those of the common oat, and what is really wonderful, we found 40, 60, 100 or more stalks, which had evidently sprung from a *single seed!* Generally, the grain stood up firm and straight, and presented a most luxuriant appearance.

Another remarkable feature was apparent in every field which we visited; the young grass, the seed of which had been sown with the oats, had a growth and apparent energy altogether un-

usual. This was the case in every field we examined.

The impression left upon the mind was that a new cereal had been introduced which would prove valuable to the farmers of New England.

Under these impressions our interest has continued, and has led us to examine every parcel of them which has come to our observation in the agricultural exhibitions and other places, where we have been. What we want, is a heavy, well-formed, prolific grain or berry—not a stout over-luxuriant straw. This we have not yet found in a single parcel of the Norway oats. They bear no fair comparison with the "Surprise" oats, so called, in color, form or weight, as they stand side by side in the half bushel. The berry of the Norway is long, thin and light, and the centre small and covered by a large husk. What the comparative value of an acre of each would be we are not able to say. These tests will be made another season, perhaps, and then we shall know more about them. In the present spring sowing, then, we advise a careful comparison of the grain of several varieties, before sweeping away all others for one which as yet is but imperfectly understood.

When several experiments have been made on soil of the same quality, location, and manured and worked alike, and sowed with different varieties of oats, harvested equally well, cleaned up alike, measured and weighed, and their component parts carefully observed, then we shall have data upon which to decide of the merits of each.

We shall be thankful for samples of a gill each of any varieties of oats that were grown last summer, together with the names they bear.

FEEDING STRAW TO STOCK.

That there is a right and a wrong way to do everything is certain; and that there is a good and a poor way to feed straw to stock I have become fully convinced. When my stock came to the barn in the fall, I concluded that I was short of fodder for the winter, unless I fed a large lot of straw that I had, which by the way was rather poor, having laid out in the rain a number of days while harvesting, and become badly washed and colored. When my stock came to the barn, I commenced to feed good early cut hay, which kept them gaining in flesh. After they were well into the winter I commenced to feed corn and poorer fodder, with some straw. But to make them eat the straw, or even half of it, was more than I could do without starving them to it, which I did not like to do. What I should do was a question to be considered. To get a straw cutter and cut all the feed by hand for twelve head of cattle was something like work. And to get a cutter to go by horse power was more than I felt able to do, so I commenced to mix hay and straw together. To do this I commenced by cleaning my barn floor and removing everything out of the way, so as to give me the full swing of the floor which was 12x40 feet. Then I shook over the whole floor a layer of good hay, then some wheat straw, which I sprinkled with water to which a little salt had been added; then strewed one peck of meal, then some poorer hay, then oat straw, then good hay, then wheat straw again, to which I added the water and meal as before. This being done I took a fork and commenced at one end of the floor and shook the whole mass together, being sure to put the fork down to the floor so as to get it thoroughly mixed. After I had it well shook together I packed it back on the bay side of the floor, leaving a place in front next to the stable, to feed. This done I walked the length of the whole pile two or three times so as to prevent it from drying up. This pile fed ten head of cattle one week, with but very little waste. The time to do this work did not exceed thirty minutes. *Does it pay to cut fodder for stock?*

S. B. BLODGETT.

Cabot, Vt., Feb. 14, 1870.

HIDE-BOUND COW.

I have a nice cow with very poor appetite—her hide seems to be hard and cracked—hide-bound. Please inform me what to do for her.

A SUBSCRIBER.

Holmes Hole, Mass., Feb. 7, 1870.

REMARKS.—1st. Card your cow thoroughly twice a day.

2d. Every morning, after carding her, wash her all over with warm water, and rub her with a coarse cloth until the hair is dry. Perhaps a little saleratus in the water will improve it.

3d. Feed cut hay, roots, meal, &c.

4th. Every alternate day give her a table-spoonful of the following powder in her meal:—

Nitrate of potash (salt-petre) . . . . . one part
Sulphur . . . . . two parts
Bi-tartrate of potash (cream of tartar) . . . three parts

Pulverize and mix.

BURSAL SWELLING ON A HORSE.

What will cure a slight soft swelling just at the upper side of the knee of a horse, caused by a bruise by breaking through ice. The horse was lame for a week, but is ntitely well now, except the swelling, which has remained now over a month. G. R. H.

Champlain, N. Y., Feb. 7, 1870.

REMARKS.—The soft swelling to which our correspondent refers, is a *ganglion*, or enlargement of one of the *bursæ mucosæ* (mucous bags) which are found in the neighborhood of joints, being parts of the sheaths of tendons or sinews. It was, doubtless, caused by mechanical injury, as suggested.

The best remedy is to paint the swelling twice a day with tincture of iodine or a strong solution of iodide of potassium, and keep a firm and constant pressure upon the swelling, by means of a plate of lead or pewter quilted into a properly constructed bandage.

BLOODY MILK.

Can you or some of your correspondents inform me what I can do to help a three-year-old heifer which has given bloody milk from one teat all the season since she calved last June. She is farrow, and gives milk now. Garget and saltpetre seem to do no good. CHARLES WOODMAN.

North Leeds, Me., Feb., 1870.

REMARKS.—The trouble in the case of this heifer consists in either inflammation or congestion of a portion of the udder. If there is inflammation there will be more or less unnatural heat in the part affected; and in that case we advise

bathing with cold water two or three times a day until the preternatural heat disappears, and then apply common iodine ointment twice a day, rubbing it in with the fingers. If there is no unnatural heat the gland is *congested*, and the ointment of iodine may be used without the previous bathing. The ointment can be obtained of any druggist.

A CALF WITH THE SCOURS.

I have a calf that is nearly a year old that has the scours, and is poor, and has been so for some time. Please tell me what will be good to relieve and build him up. I have been giving him oats, but he will not eat enough to do him much good.

Benton, Me., Feb. 9, 1870. W. M.

REMARKS.—Card your calf twice every day, and feed him well cooked potatoes, with a little sweet milk added, if he will eat it as well, and a little cayenne pepper. If he continues to scour with this feed, give him some astringent, like a decoction of hemlock or white oak bark. If he has vermin, destroy them with carbolic acid or some other efficient remedy.

RELIEVING CHOKED ANIMALS.

Sometime since I read the description of an apparatus for relieving choked animals, which in the main was correct. Having seen a similar contrivance kept and used in the old country, I think I can suggest an improvement on the broom-handle or wooden rod, recommended for forcing down the obstruction. Wet, roll, and sew together a strip of sole leather of the desired length, and wide enough to be about an inch in diameter when finished, then get the tinman to rivet on to each end of the leather tube, pieces of lead so as to form an oblong hollow ball, soldered together, about an inch and a half in diameter, with one hole at the end of the ball and two or more holes in its side, through which the creature may breathe or gas escape, and you will have a flexible rod of sufficient strength to effect the purpose. In the one that I saw there, one of the end balls was left a little flaring, something like a tunnel, to fit more firmly to the obstruction in the throat, so that either end could be used as seemed most efficient.

B. CONNELLY.

Careyville, Mass., Feb. 9, 1870.

COTSWOLD SHEEP.

Some time in November, 1868, I made mention of the efforts of T. W. Gordon, Farmington Falls, Maine, to improve his flock of sheep by the purchase of a thoroughbred Cotswold ram, of Burdett Loomis, of Connecticut. He then set himself to work to procure a flock of large sheep. After an extensive ride, and paying from five to seven dollars per head, he succeeded in obtaining some forty-six that suited him.

Last summer he raised forty-four lambs, of which he sold nineteen this last fall for $190; having twenty-five left, for some of which he has refused $20 each, scarcely one of which will weigh less than 100 pounds. The wool on many of these lambs measures eight to nine inches in length and is of excellent quality.

The buck sheared 10½ pounds when a year old. Last spring, when two years old, he sheared 13½ pounds of clean wool,—not *grease* or *tar*,—and he weighed 300 pounds. Mr. G. has had extensive experience with sheep, and is, perhaps, as good a judge of them as any other breeder in Maine, and here perhaps lies the secret of his success. Good judgment in making selections for breeding is of as much importance as good care after selecting. Mr. G. informed me that he visited Canada last fall for the purpose of purchasing thoroughbreds; examined many of the best flocks in the Dominion, but found none equal to the flock of Mr. Loomis. He found many flocks in Canada being thinned out by a disease called the "scours," which is slow in its progress, but very fatal. Mr. G. says his sheep are as docile and peaceable as any flock in the State, and manifest none of that roving disposition sometimes attributed to long wools by another class of breeders. They gave him no trouble last season, and he anticipates none the coming season. He is now well satisfied that Cotswolds and their grades are the most profitable sheep for wool and mutton. They are tough, hardy, easily raised and yield much larger returns than others. ZEN.

Springvale, Me., Jan. 22, 1870.

MANURING FOR GRASS.

During the recent discussion in the FARMER of the value of corn stalk fodder, it seems to have been generally admitted that when sown broadcast or too thickly in rows, the fodder is of inferior quality. May not the same principle apply to grass growing? Do not farmers miss it by putting their whole stock of manure on to their land at once and stocking down to grass, and thus getting some three or four tons of what they call hay to the acre? Would it not be for their interest to put on say one-third to begin with, and repeat it once in two years, and obtain from one and a half to two tons to the acre of good hay, such as their cattle would eat all up? In the first case they have no manure to replenish their land in case of winter kill; in the last case they would have their manure to spread with a sprinkling of seed, then brush it over and all is right. Don't all speak at once, but consider the matter. V. BAKER.

Brookfield, Vt., Feb., 1870.

THE MOTHERS.

Perhaps in no country and in no age have the habits of a people changed as greatly as have those of the people of New England during the past sixty years. Enjoying a happy, green old age, I know a lady in Berkshire county, Mass., who when nine years of age, spun tow yarn of sufficient fineness and evenness for the filling of a web of pocket-handkerchiefs; at fifteen she spun a week for a neighbor for sixty-seven cents, with which she bought the stockings in which she was married, and which she has lent to six other brides for the same purpose. She is expert in weaving diaper, coverlets, blankets, carpets, &c., also, with her needle as tailoress, dressmaker, and embroiderer, &c. She is a good dairy woman, and understands every process of butter and cheese making, from milking cows to serving as committe on the award of premiums at the agricultural fair. She is the mother of eight children, four boys and four girls. "The fathers, where are they?" and the mothers, where are *they?* I.

Cheshire, Mass., Jan., 1870.

HOLDING ON TO THE FARM ANOTHER YEAR.

Six months ago I had about decided to sell our farm; but purchasers for farms of 300 acres or more with good buildings, pleasantly located on the Connecticut river, are not near as numerous as for farms valued from $3000 to $5000. As I do not find the right man to buy, I must be making preparation for the campaign of the coming season. And the first requisite to a successful prosecution of agricultural labor is a good selection of agricultural papers; with these and a supply of

good tools, implements and improved farm machinery, with a fair share of tact, skill and enterprise, aided by good health, one may become a successful farmer, and independent so far as freedom from debt can make a man so. Yet as every experienced man knows 'tis a slow road to wealth, though sure to furnish a competency to the frugal and industrious, which perhaps is a condition affording as much and perhaps more happiness than many others in life. WILLIAM CHILD.

Fairlee, Vt., Jan., 1870.

LUNG DISEASE IN COWS.

Mr. W. D. Hall, of New Ashford, Mass., has lost two cows of some disease of the lungs and one that had the scours until she became so weak as to fall forward on to her head, and he wishes to know if such is the effect or symptoms of horn-ail? W.

REMARKS.—Cows, and other animals are liable to have various diseases of the lungs. What particular one affected the two cows first mentioned, we cannot tell, as the symptoms are not mentioned. But the one that had the scours was affected with acute inflammation of the mucous or lining membrane of the intestines, and not with horn-ail.

EFFECT OF CHERRY LEAVES.

The statement of Mr. Haskell, from which he infers that cherry leaves are not poisonous, and that the only danger from cattle eating them arises from their indigestibility when wilted, seems to me to show conclusively that they are poisonous. Food is occasionally thrown from the stomach, after remaining there forty-eight hours, in a perfect state, without having produced any such symptoms as are witnessed in cases of "cherry poisoning." The effects he mentioned, I ascribe to poison—to some principle that destroyed the vital action of the animal functions,—a result never caused by healthy food remaining undigested some eight or twelve hours in the stomach. Wilted clover, red top, or herdsgrass produces no such fatal effects; why then should wilted cherry leaves, unless they contain some injurious principle which may properly be called poison? V. BAKER.

Brookfield, Vt., Jan. 24, 1870.

CATTLE GNAWING BOARDS.

I am not entirely satisfied with your reply to a late inquiry for a remedy for this disease. I have had cows do the same, and my method is to give one heaping tablespoonful of saltpetre. This has cured them at once. It is also good for garget in cows; far better in my opinion than garget.

MOSES HUNTLEY.

St. Johnsbury Centre, Vt., Feb, 14, 1870.

Please request "A Reader" whose cattle have a habit of gnawing boards, &c., to try feeding a few quarts of rye or wheat bran, each, daily, and report result through FARMER. G.

Ashfield, Mass., Feb. 15, 1870.

CREEPING CLOVER.

In the FARMER, some time last fall, I saw some remarks upon this variety of clover. It appears to be a new plant here as well as in Vermont and Massachusetts. A field near my house had a great deal of it this summer, and it attracted a good deal of attention. It grew very thick, and made fine hay, and a heavy crop in spots where red clover was killed out. Some farmers were of the opinion that it was best to save seed and sow it, but I think none was threshed. I noticed it in many fields in this neighborhood. Some feared it would prove troublesome, but I do not think so. Perhaps it may not be as plentiful again in several years. Time will tell. GRANITE.

Bloomfield, C. W., 1870.

SWEET FLAG.

I would say to "A. B." in FARMER of Feb. 12, that the only way to totally eradicate sweet flag is to take off the entire surface of the land in which it grows, haul it to a dry knoll and pile, and after a while it will rot. I once knew a neighbor to eradicate several large beds of it in a low meadow in this way, and it has never shown itself since. Care should be taken to get all the roots off. M. C. PECK.

Benson, Vt., Feb. 15, 1870.

TO EXTERMINATE HEN LICE.

A very easy and sure remedy for exterminating vermin from hen houses is to take from five to ten cents worth of chloride of lime, which can be procured at any apothecary's store, and sprinkle it over the roosts and about the house where the lice are most likely to be found; or make a wash of it and wash the roosts. I have found one or two applications an effectual remedy. L. B.

Winchendon, Mass., Jan. 11, 1870.

WEST MILTON, VT., CHEESE FACTORY.

The West Milton cheese factory was in operation five months, and received the milk of 300 to 500 cows; some of the patrons having brought milk only during the warmest weather. Whole amount of milk 1,336,717 pounds; amount of cheese, 187,398¼ pounds. It required 9¾ pounds milk for a pound of cheese. Whole amount of sales, $22 386.95. The net average price per pound was 14 3-10 cents. D. L. FIELD.

GREAT YIELD OF BUTTER.

Mr. Moses S. Saunders, of this town, owns a three-year-old heifer,—half Devon, half Jersey,—from which in the present month of January, were made four pounds of butter from twenty-three quarts of milk. She has had but common feed, viz:—fresh and salt hay, with one quart of meal per day. D. A. REED.

Rowley, Mass., Jan. 23, 1870.

GREAT YIELD OF COMMON OATS.

A single oat that germinated in my garden near a bed of white beets, one of which weighed eight pounds, produced 53 heads, three of the largest of which contained 300 or more kernels each,—the total product, by patient count, amounting to 10,117 kernels, after rejecting those that were blighted.

Marshfield, Vt., 1870. C. R. HILLS.

—At the winter meeting of the Windsor County, Vt., Agricultural Society the first premium on best acre of corn was awarded to N. Harlow, Hartland, 94½ bushels; 2d, to J. Paddleford, Hartland, 88½ bushels; to Mr. P. also for best wheat, 27 1-12th bushels; 2d, S. Taylor, 21½ bushels; O. Paul, Pomfret, best oats, 96⅞ bushels; 2d, J. Paddleford 78½ bushels; best rye, S. Taylor, Hartland, 28 3-5 bushels; N. Humphrey, Hartland, best potatoes, 324 bushels; C. Whitman, Pomfret, best carrots, 36⅔ bushels on ten rods.

CROPS IN MAINE.

During our late visits into the State of Maine, we not only listened to many public remarks in relation to agricultural practices and their results, but made many inquiries as to the general condition of the art in that State; what the leading crops are, and whether farmers, as a class, are gradually improving their farms so as to give them a permanent value of one or two per cent., or more, annually.

In all the public exercises, and in private conversations, an interest and earnestness in farming, was clearly manifested. It was evidently the earnestness of those who believe their calling to be honorable, tending to elevate the race, and indispensable in sustaining it.

The discussions in the State Board have greatly tended to encourage the farmers of the State, and have recognized the dignity and high character of the calling.

Its leading crops are grass and potatoes, but investigations showed that the wheat crop, which is adapted to a large portion of the soil, has been greatly neglected. There is official authority for saying that the State of Maine needs 650,000 barrels of flour yearly—nearly all of which is imported at an expense hitherto of nearly ten millions of dollars! Stimulated by this startling development, the legislature has made appropriations of money for premiums on wheat crops, under certain conditions, which have already had an influence to increase the breadth of land devoted to wheat.

In the sessions of the Board last year, much attention was given to the potato crop, where every means seem to have been used to elicit from the members information in regard to varieties, quality, productiveness, soils best adapted, kinds and quality of manure to be used, and every thing else bearing upon the crop.

In a lecture upon the *Culture of the Potato*, by Mr. Z. A. Gilbert, from the Androscoggin Society, he laid down several points for discussion:—

1. What we want. 2. What varieties shall we plant? 3. Preparation of the soil and manure. 4. Planting. 5. After culture. 6. Harvesting. 7. Marketing. These points were thoroughly discussed, with the object to bring out facts and settle principles, so that the cultivator when he goes into the field to plant shall have more definite conclusions as to what is best for him to do, than he ever had before. It is hardly probable that the principles or practices stated, fell alike upon all who heard them, so that a variety of opinion and practice will still prevail in procuring future crops.

The Hon. Samuel Wasson, President of the Board, read an interesting paper on the "History of the Potato," which affords a remarkable instance of what human skill can accomplish in ameliorating some of nature's pungent and poisonous plants, into mild and wholesome food.

Our word potato, is supposed to be a corruption of the Indian word *batatas*. The potato was first found in 33° south latitude, in the mountains near Valparaiso about 1550. Sir Walter Raleigh is said to have carried it to Ireland in 1610. In 1728, the potato was carried to Scotland, but the people opposed the introduction of this new vegetable, because its name was not mentioned in the Bible.

The priests in the Ionian isles, said the potato was one of the forbidden fruits—the cause of man's fall, and its use was irreligious.

In France, this vegetable was viewed with extreme disfavor. In vain did Louis XVI. and his court wear its flowers in the buttonholes of their coats to enlist popular favor. At last, Parmentier, the chemist, hit upon the following ingenious plan. He planted a field near Paris, put up notices around the field that all persons who stole any of the fruit would be prosecuted with the utmost rigor of the law. *Within a fortnight thereafter every potato had been stolen and eaten!*

It is somewhat remarkable that in nearly every State in Europe its introduction met with great opposition; even as late as 1723, its use was interdicted in some of the German States, being accused of producing dysentery and leprosy.

In its wild state, it is a watery, bitter, unwholesome plant, with tubers rarely an inch in diameter, or exceeding half an ounce in weight.

In Maine, the value *per acre* of these several crops was as follows, in 1866:—Potatoes, $79.56; corn, $44.55; wheat, $36.32.

This intrinsic value, and the facilities for

transporting the crop to distant markets by water and by rail, gives it the *first* value as an agricultural product, or, if not, only second to that of the hay crop. The importance of the crop, therefore, had led to the introduction of numerous varieties, by planting potato balls, until catalogues enumerate more than 500 varieties. The best of these are second only, as an article of diet, to bread and meat alone.

This value, and the universal use of the potato throughout the New England States, has called into action an amount of ability, experiment and investigation, which promises to more than make good several varieties of great excellence which were long popular, but which have greatly declined in quantity and quality.

At Lisbon Hall, in Lewiston, where the State Board held its annual session, Mr. MOSES H. HUSSEY, of North Berwick, had on exhibition a choice selection of potatoes, for which he has become somewhat famous for raising. At the late Farmers' Convention in Manchester, N. H., he received a silver medal for the best exhibition of potatoes. Among the varieties at Lisbon Hall, were the Early Rose, Climax, Harrison, Early Prince, Calico, Vanderveer and Bresee's Favorite; for the latter he paid $60 per bushel, and raised from it 145½ bushels the last season. For the Climax, $25 per peck. For the Excelsior $1.00 per pound, and for a single eye of another variety he paid $5. By careful propagation by means of slips, he raised from this a bushel of good potatoes.

Before leaving North Berwick, we had an opportunity of looking at the potatoes in Mr. Hussey's cellars. In one bin were 700 bushels of the Early Rose variety, in which not a mis-shapen or injured tuber could be seen. As many more, of different varieties, were ranged about the cellar, all appearing sound, and of fair size and shape. In a neighbor's cellar, near by, were nearly a thousand bushels of more, different varieties, but each variety selected for good qualities in flavor and productiveness. The activity already excited in regard to this invaluable vegetable, has already introduced some excellent varieties, and promises to enlarge the list, to supply the places of old and excellent ones which have had their day.

Mr. Hussey also raises cabbages for the Boston market, and lifted a few samples of 14 tons, covered with forest leaves and evergreen branches, which were as sound and bright as the day when they were placed there. These will be sent to market in the latter part of March and early April, and command a remunerative price.

It is fortunate that some persons make a specialty of this and other vegetables, by testing varieties, and thus enabling them to reject worthless or indifferent ones, and preserve, propagate, and sell the good.

VERMONT HORSE STOCK COMPANY.

We have received a circular addressed to the farmers of Vermont presenting the purposes of this association, and inviting subscriptions to its capital stock of not less than $100,000. Circulars for subscriptions are now in the hands of the Directors and will soon be generally circulated. Some half a dozen towns have been canvassed and though not richer than the average of the 200 towns in the State, nearly $1000 to the town were subscribed. Judge Colburn, of Springfield, the efficient Treasurer of the Vermont State Agricultural Society, says: "It is a good thing, and with such a board of Directors, it must pay, and I am in favor of our Society taking liberally of the stock." Hon. Carlos Baxter, of Burlington, Vt., offers to be one of ten to take $1000 each in the county of Chittenden. These subscriptions are not gifts, but investments in stock, which it is believed will yield good dividends as well as greatly benefit the farmers of the State by assisting them to improve their breeds of horses.

We have much confidence in the success of this association. It proposes to do what individual farmers of comparatively small means are unable to do singly, however well satisfied they may be of the necessity of introducing better breeds of horses. The use of machinery has created a demand for heavier horses, while the "agricultural horse trot" of the few past years has had a tendency to encourage animals poorly fitted for the drudgery of farm work.

Some years since the old Massachusetts Society for the Promotion of Agriculture imported several Percheron horses from France, and have kept them at their stables, near Boston. A few years since one of these imported horses, "Conqueror," was sold at auction by the society for $500. On putting him into a stable in the city, the owner immediately resold him for $1000. He is now in Maine, and we understand his owner there has a standing offer of $2500 for him. One of his colts from a large Canada mare, owned by B. F. Ricker of Brighton, was sold last summer to an Illinois gentleman, when the colt was two years and nine months old, for $1 per pound, live weight, deliv-

ered in Chicago. With a halter and headstall, the colt then weighed 1510 pounds, and the bargain was finally compromised by the delivery of the colt at Brighton for $1400. The buyer had visited Canada and various places in the States, but was better pleased with this animal than with any that he saw elsewhere, and we understand that he is well satisfied with his purchase, since getting him home.

With such a demand for good horses we do not see why the Vermont Company, managed by such men as now compose its directors, and possessing the soil and climate which developed the Morgans and Black Hawks, may not realize the expectations of its most sanguine friends.

CHEESE MANUFACTURERS' ASSOCIATION.

Having failed to receive a detailed account of the proceedings of the annual meeting of the Massachusetts Cheese Manufacturers' Association at Hardwick last week, we copy the following brief notice from the *Daily Journal*. There was a large attendance of farmers, the President, Thomas P. Root, of Barre, in the chair. The meeting was opened on Tuesday evening by an address from Alexander Hyde of Lee, on "The requisites for the production of milk." A discussion followed, and then the question, "How shall we improve our pastures?" was discussed. Stable management and winter feeding of cattle were also discussed. On Wednesday morning the following officers for 1870 were elected:—

President.—Thomas P. Root of Barre.
Vice Presidents.—J. W. Powers of Hardwick, Alonzo Lincoln of Oakham.
Secretary.—N. S. Hubbard of Brimfield.
Treasurer.—B. F Hamilton of New Braintree.
Executive Committee.—Thomas P. Root of Barre, J. W. Powers of Hardwick, Alonzo Lincoln of Oakham, N. S. Hubbard of Brimfield, B. F. Hamilton of New Braintree.

Reports from the various factories were made. In the afternoon, Mr. Charles L. Flint, Secretary of the Board of Agriculture, delivered a very able address on "The production of milk and treatment of dairy stock." In the evening Richard Goodman of Lenox read a paper on the dairy stock of New England, its breeding and management.

THE "RICH" STEER.—On passing the stall of H. Bird & Co, 38 & 40 Faneuil Hall Market, recently, we noticed a crowd collected around some very extra beef then on the hooks. On inquiry, we learned that it was from the steer noticed by our cattle market reporter in his report of February 2, and which was fed by J. T. & V. Rich, Shoreham, Vt., and sold to George A. Sawyer, of Brighton. At the time of the sale at Cambridge, the steer weighed 2790 pounds. His dressed weight was 2125 pounds, a shrinkage of less than 24 per cent. from that weight. The meat weighed 1685, tallow 280, hide 160 pounds. One hind quarter 414, the other 394; back halves of the two fore quarters 398, and the two rattle runs 479 pounds. The steer was very neatly dressed by Mr. Sawyer, and the beef, though from a "native" steer, was admitted by good judges to be equal to any that has been seen inside of Faneuil market for a long time.

MILITARY INSTRUCTION IN AG'L COLLEGES.—A correspondent of the NEW ENGLAND FARMER, in writing from the Massachusetts Agricultural College at Amherst, says:—"I am informed that this is the only Agricultural College that has, as yet, established military instruction as a part of the regular course, although that is made one of the conditions of the grant by Government;" but he is certainly in error. Our own institution at Orono has from the first given attention to military instruction, in conformity with the act of Congress, Capt. Henry E. Sellers of Bangor, having most acceptably filled the position of military instructor. The Trustees are hoping to secure the services of a government officer for this position at an early day.—*Maine Farmer.*

REMARKS.—We presume that our correspondent will be glad to learn that the "information" on which he based his remark is not correct. We hope that the provisions of the law establishing these institutions will be carefully observed by the managers of each one of them.

AGRICULTURAL ITEMS.

—A son of General P. P. Pitkin, of Montpelier, has a large sheep which he harnesses to a scraper and does good public service by clearing the sidewalks of snow.

—Mr. J. G. Huntington, of Atkinson, Maine, has invented a new horse rake, which is noted for its simplicity of construction, ease and efficiency of working and cheapness in price, and, so far as used, is pronounced the best made.

—The New York State Agricultural Society have agreed upon Utica as the place for holding the next State Fair. Solon D. Hungerford, of Jefferson County, has been elected President, and Thos. H. Faile, Jr., of New York, and others, Vice-Presidents.

—The Waterville, Maine, *Mail* says, a remarkably fine pair of grade Hereford oxen were weighed at the hay scales recently. Their weight was 4470 pounds, their measurement eight feet two inches—their age five years. They belong to Mr. H. C. Burleigh, of Fairfield, and reflect honor upon the best herd of Herefords in New England.

—S. P. Miller, Fayetteville, Vt., has a grade Durham cow which produced from April 20th to November 19th, 1869, 311 pounds of butter and 142 quarts of milk, beside the milk and cream used in a family of five persons. Her feed consisted of two quarts of meal and shorts per day, with ordinary pasture privileges.

—Four of the heaviest cattle ever raised in this country were shipped from Poughkeepsie to New York City recently. The heaviest of the four

weighed over 4,100 pounds and the lightest 3,300. They are each six years old, were raised in La Grange, Dutchess County, and were sold for $3,200. Their hides are to be stuffed and placed in Central Park.

—A correspondent of the NEW ENGLAND FARMER has made skim-milk cheese in the fall when milk can be kept sweet several days, by putting the juice of grated carrots into the milk after skimming, as is done to color butter, and then treat the milk in the ordinary way of making cheese. After forty years' experience he pronounces such cheese nice.

—Mr. Hollis Daggett, of Monroe Co., N. Y., says many of the bees in his section are starving—that not over one-tenth of them will survive the winter without feeding, and adds that they can be easily and cheaply saved—especially if in movable comb-hives—by feeding them the syrup of coffee sugar. He is feeding his bees in this way, taking out the combs and filling them. When the syrup is put in the comb it should be as warm as milk when first drawn from the udder.

—The Massachusetts Agricultural College has property amounting to $196,500, of which the live stock is valued at $6880, tools and vehicles $2240, produce $4345. The balance of accounts between the farm and its expense is $2567. There were 119 students in 1869. The trustees estimate that the buildings needed to accommodate the faculty and the next class will cost between $100,000 and $200,000, according to the number provided for.

—Mr. J. E. Porter of central Illinois has for several years mixed one third oats with his seed wheat, and according to the *Western Rural* gets much better crops than when wheat is sown alone. Last year wheat alone was nearly a failure, while that with oats produced fair crops. Mr. P. raised fifteen bushels of wheat and thirty of oats per acre. The two grains are harvested together, and are readily separated by any of the new fanning mills.

—Many cultivators ascribe much of the popularity of the Rose and other new varieties of potatoes, to the care with which they have been cultivated and the light seeding, generally single eyes, which their high price has induced. A correspondent of the *Country Gentleman* says that he has succeeded during the past three years in bringing some of the old varieties to the size and productiveness of the new ones, by the same cultivation which has been given to them.

—The Lexington, Ky., *Home Journal* says that several Southern planters went to Illinois and Indiana last season for laborers to harvest their crops, and succeeded beyond their expectation. As the cotton and sugar crops are not usually gathered and saved before December, and very frequently not until February, and consequently after the grain and grass crops of the north are secured, they obtained reliable men for these comparatively leisure months, who went to work cheerfully and saved the southern crops in excellent style. After a profitable late fall and winter engagement, these men return home in season for spring's work. It is thought larger numbers will be engaged next year.

—A correspondent of the *Country Gentleman* says, to be completely prosperous, stock-raising must be in a locality where good pastures and mowings can be kept permanently in grass; and on genuine natural grass land it will not answer under any circumstances to use the plough, as it takes many years of good management to bring the grass back to the established state. The very best grass land in the Southwest, the same as in England, never was seeded at all; and when the plough is put into such a turf it is synonymous with killing the goose which laid the golden eggs.

For the New England Farmer.

SHALL WE RAISE OUR CORN?

The discussion upon corn at the recent Farmers' Convention at Manchester, N. H. was earnest and practical. The successful growers regarded it as a profitable crop; regretted that the State should be obliged to buy so much, and warmly urged their brother farmers to raise their own corn.

There are some, it appears, who consider this counsel as old fogyish, and not in keeping with the times, and that it is better to buy corn, even if there is a net profit of 50 to 100 per cent. in raising it. Whether the growing of corn in New Hampshire is an antiquated notion or not, there are certainly sound arguments in favor of its cultivation, and the crop ought not to be condemned because of its antiquity.

It will be generally admitted that farmers require a large amount of some kind of grain to make their beef, pork, mutton, poultry, butter, &c., and for their working animals, and that corn is the best for all these purposes. The only question which admits of discussion is, Where shall we get it? From the West and South say the advocates of buying. At one time it was brought from these sections at marvellous low rates. If it could always be had from either section cheaper than we can raise it, all must admit buying is the best policy. But extensive home markets are arising at the South and West, and experience is teaching them that it is for their interest to raise less grain and expend more of what they do raise upon their farms and have beef, pork, mutton, wool and cheese and butter to sell.

The railroads and middle men are becoming very exacting in their demands—far more so than when they had lands to sell and sought patronage. The price has steadily advanced until there is now a wide margin for profit in raising it here,—our best cultivators claiming that it can be produced on our rough farms

for about 72 cents per bushel. This leaves a balance in favor of the home producer, for a net profit equal to what the Western farmer receives, on an average, for his delivered at the nearest market. If the present schemes of railroad consolidation are carried out, or if a few men can buy up and control long lines of road, the prospects of having lower freights or smaller commissions are not encouraging, and it is pretty certain that for some time to come New England farmers can fill their corn bins cheaper from their own acres than from the valley of the Mississippi. As long as we can realize as great and even greater net profit, per acre, is it not sufficient reason for raising more?

Again, the advocates of buying say that the cultivation of corn requires a good deal of attention and labor; the hoeing interferes with haying, &c.; therefore we had better raise more hay and sell a part of that or some other product and get money to buy corn. This may be a good policy for market gardeners and grass farmers to pursue. But every well appointed farm is supposed to have the requisite machinery, tools and help to raise some hoed crops, and it requires no very great ability to carry the hoeing through in time, without interfering with haying. Recent inventions enable us at the least to lessen the cost of planting and cultivating, and improved methods of cutting, curing and feeding the fodder it makes, has given an increased value to the stalks.

Well cured corn fodder is worth more than meadow hay. Where both the ears and stalks are consumed upon the farm, the stalks can be cut earlier and at the bottom, which greatly improves the fodder. Where neat stock is kept, the advantage of having the fodder ought to decide in favor of raising our own corn. Well filled bins of a home growth indicate that the stock will fare better than if their owners depended upon buying. As to the plan of selling hay and then buying corn with the proceeds, it may be advisable under some circumstances; still, by raising a few acres of corn and making a judicious use of the fodder, there would be more hay to be sold and no corn to be bought.

The potato is the only hoed crop that can compete with corn for supremacy in value in the New England States. In Maine and Vermont the potato leads by a large balance in its favor; in New Hampshire it is just ahead, while in Massachusetts, Connecticut and Rhode Island, corn ranks highest. Since 1862 the price of potatoes has been high and their culture has rapidly increased. But just now prices have a downward tendency, and will undoubtedly rule lower during the next decade. The Northwest has found that potatoes can be grown there at a profit, and is competing with us in the New Orleans and other Southern markets, and should the duties be taken off from the products of the British Provinces, the profits of this crop would be still further reduced. Allowing, however, that an acre of potatoes gives more money than an acre of corn, is it advisable to grow them largely on the same farm? Even under skilful management, it is an exhausting crop. It draws largely upon the organic elements of the soil, beside the potash and soda, and returns nothing to it, and where the extravagantly wasteful system of burning is pursued to get new land for it, the ultimate effects of severe cropping are very injurious. In those localities in New Hampshire where it has been extensively raised for starch factories and the Boston market, this exhausting effect is already apparent. From first to last, both in raising and marketing, it is a heavy, laboricus crop, and is attended with many risks. If the tubers fail to grow well, or if they rot, all is lost.

With corn, if the ears fail to ripen or fill out, the fodder is some remuneration. A large amount is returned to the soil through the fodder, stubble and roots, and since the phosphates can now be so readily restored to the soil, selling corn from a farm is not likely to prove as detrimental as raising potatoes. The freedom of corn from diseases, the almost certainty of a fair crop and the fact that both the grain and fodder can be kept, if not wanted immediately, give it preference to the potato. Corn, in these respects, is superior to all other hoed and root crops. It is surer and more remunerative than the other cereals, and deserves always to rank next to hay, even in New England. Perhaps, though, we should except the northern parts of Maine, New Hampshire and Vermont, which are better adapted to the potato.

Were there a few more public spirited men, like secretary Lyman of New Hampshire, in each State, a new zeal would be awakened in this truly valuable cereal, and our farmers would see that it is for their interest to raise more and buy less corn. N. S. T.

Lawrence, Mass., Feb. 3, 1870.

For the New England Farmer.

CHEESE-MAKING.

The cheese that took the first premium at the Orleans County, Vt., fair in 1869, was over a year old and was made by Mrs. G. B. Brewster of Irasburg, who describes her method as follows:—

We have twenty-three cows, and make butter until the hot weather of July, then we make one cheese each day.

The night's milk is strained into a large tin tub and ice put into it to cool it and it is stirred until the ice is all melted, then it stands till morning, when it is skimmed and about a fifth part of the milk is taken out and so much warmed that when it is poured back it will make the whole as warm as new milk. Then the cream that was taken off is put into a cloth

strainer and the morning's milk strained upon and through it, so that the cream is all dissolved and mixed with the milk, which is then ready for the solution of rennet which is applied in sufficient quantity to bring the curd (or cause coagulation) in one hour; the quantity will be about a pint for thirty pails of milk. The curd is then cut into inch squares and stands until the curd settles. Then break it up carefully with the hands and let it stand till the curd settles again. After which dip off two pailfuls of whey to set aside to cool, also dip as much more to heat. When it is hot dip it upon the curd; then heat more whey and put on hot whey three times, which scalds or cooks the curd so that when a piece is bitten there is a slight squeaking sound. During this time it should be constantly stirred to prevent it settling together and breaking it finer. The warm whey is now drawn off and the cold whey poured on to cool it. When cool, drain dry and add a teacupful of salt to seventeen pounds of curd, working it in with the hands and continually breaking the curd. Then spread a cloth in the hoop and fill in the curd. Let it remain in the press twenty-four hours, turning it once in the time. When pressed enough put on the cloth sack which has been saturated with whey butter, and put the cheese on broad shelves, in a light, well-ventilated room to cure. During the ripening process it is turned and rubbed every day and oiled with whey butter to keep it from drying and cracking on the surface.

Rennet.

The stomach of calves a week or more old is filled with salt and hung to dry. When rennet is wanted put two or three into a stone jar full of water; after soaking a few days the liquid is ready for use. Add water to the jar in place of the liquid used, which keeps up the supply. Z. E. J.

Irasburg, Vt., Feb. 10, 1870.

For the New England Farmer.

MEDICAL TOPICS.

BY A MEDICAL MAN.

How to Restore Frozen Persons.

The present winter having been unusually mild, thus far, we have heard of no cases of fatal, or even severe freezing. February and and March, however, will probably give us weather of another sort; and it will be well for every person to know how to treat, properly, one who is near perishing from exposure to intense cold, or who has severely frozen some portion of his body or extremities.

The first effect of an exposure of the whole body to severe cold, is an almost irresistible impulse to sleep, which, if yielded to, is soon succeeded by coma or stupor, and death. During the state of coma, the body of the sufferer is found to be very pale and cold; the respiration and pulse are almost imperceptible, and the pupils are dilated; but the limbs are flexible as long as life remains, unless the degree of cold be very great indeed.

Persons who have been exhausted by hunger, watching, or fatigue, and those who indulge in spiritous liquors, exhausted as they are by perpetual stimulation, are much more liable to suffer from cold, than are others.

The indications of treatment whenever a person has been exposed to severe cold, are, 1st. To produce moderate reaction, and restore the circulation and sensibility; and 2d. To avoid excessive reaction, which would surely lead to violent and dangerous inflammation. The body should first be rubbed with snow; and afterwards, when its warmth and sensibility are a little restored, it should be wiped quite dry, and well rubbed with fur or flannel. The patient should now be put into a cold bed, in a room without a fire, a stimulating *enema* should be administered, and a little wine and water, or very weak spirit and water, given as soon as he can swallow;—the *enema* may be composed of water and salt, with a little oil of turpentine. The after treatment must be regulated by the state of the patient. Mild cordials or stimulants, and nourishing food will be sufficient in most cases. Do not bring the patient into a warm room, nor apply artificial heat, in any way, until complete reaction has taken place, and all danger of excessive inflammation has passed by.

Frost-bite.

In cases where some portions of the body, only, are frozen, as the feet or the hands, the part or parts affected should be first rubbed with snow; for, whilst the friction restores the circulation and sensibility, the snow prevents any excessive reaction. After a time, cold water may be substituted for the snow and the friction may be brisker. These applications should be made in a room without a fire, and a high, or even a moderate temperature must be avoided for some time, if the patient would escape the subsequent inconvenience of *chilblains* and *running sores*. If the freezing has been so severe that mortification and sloughing ensue, stimulating poultices, washes, or ointments will be important. A poultice made of yeast, or of carrots, with a little pulverized charcoal; a wash of diluted creosote or carbolic acid; or an ointment in which creosote or carbolic acid is an ingredient,—either one of these will be useful.

Chilblains consist in an atonic inflammation of the skin, induced by sudden alternations of temperature, such as warming the feet and hands by the fire when cold and damp. A great variety of things have been proposed as remedies for these troublesome visitors; but all of them sometimes fail, though most of them possess some virtue. The following are among the best:—Soap liniment six parts, tincture of cantharides one part; spirit of camphor, and spirit of ammonia, either sepa-

rate or combined; common opodeldoc; common volatile liniment; diluted creosote, or carbolic acid; cold, shallow foot-baths, &c.

For the New England Farmer.

SENDING MILK TO THE CITY.

At the request of several farmers in Berkshire County, Mass., I send you the following suggestions from my experience in Eastern Massachusetts in relation to the transportation of milk from the country to the city.

The city peddlers or distributors should furnish ample security for the monthly payments for the amount of milk they receive of farmers or the car agents during the month, and provide three sets of cans, so that they shall leave as many empty, as they take of full ones each day.

The railroads must furnish box milk cars of suitable size, on springs, say thirty-four feet long, lined inside and top, and filled in with about six inches of charcoal, fitted up with shelves and racks for the milk, double doors, with windows in them, on each side.

The car agent must see that ice houses are erected and filled near the track, at the starting point; receive, examine and account for all milk left at the stations, set out the cans for each farmer, and see that they are not injured by handling; collect bills promptly of the city peddlers and pay over the same to each farmer monthly. He must make all contracts as to price and quantity by the six months; provide either in the city or elsewhere a butter or cheese factory to use up any surplus not required by the consumers, so that farmers may always dispose of all the milk they make.

With such arrangements, and with trustworthy and responsible agents on the route and in the city, farmers may have confidence in the business and keep as many cows and feed them as well as their means will justify. Notwithstanding Dr. Loring's caution, they will provide a supply of sweet or southern corn fodder to supplement their pasture feed, always wilting it two days before using it; also a supply of roots, which should be fed immediately after milking in the morning, or cut up with fodder, all of which, including hay and straw, should be cut and steamed, or hot water put upon it. The cans should be rinsed in cold water first, then scalded with hot water, and again rinsed in cold water, then placed bottom up on pins or a rack. The milk should be cooled and protected from heat, by water from a spring or well, and covered. In milking, be very careful to brush and clean the cow so that no dirt will get into the milk,—strain it carefully through linen strainers, and while cooling stir it two or three times with a dipper or paddle, and when cool close up the cans. While on the way to, or while at the station, allow no sun or heat to come in contact with the cans. No water, barn-yard manure or other substance is wanted in milk, but it must be kept cool by a plenty of ice around the cans when in the car, which should be shut up as soon as loaded. With such precautions the milk will be transported in good order, and if the city peddlers complain of its being bad, hold the car agent responsible for not examining it when it left the cars.

If farmers find that these agents take any advantage in regard to price, &c., they must combine and manage their own business as those of Eastern Massachusetts and New Hampshire have done. If the farmers of Berkshire County will enter into such arrangements I am confident they will succeed. But if this cannot be done a butter and cheese factory should be established, the cost and plan of which may be the subject of another article. EASTERN MASSACHUSETTS.

February, 16, 1870.

For the New England Farmer.

PREPARING SHINGLES FOR ROOFS.

An editorial in the FARMER of the 12th inst. upon this subject, deserves the careful attention of every owner of buildings. Whatever may be the cause, it is certain that shingles do not last as long as they did fifty years ago. The "gravel and tar" covering for flat roofs is used to some extent here, and, so far, I think it proves satisfactory. The "*Plastic Slate Roofing*" has not been much used in this vicinity. Cedar and pine are plenty, yet shingles are dear, and farmers and others find it expensive keeping their roofs in repair.

Two or three years ago I was traveling on a steamboat, and a gentleman in the course of conversation informed me that his business for several years had been roofing buildings. He was then engaged in putting on *gravel and tar roofs*. He thought it a good material, but said he thought shingles might be prepared so as to do better. He had experimented considerably, and said he thought the following preparation would preserve shingles so that they would last sixty years.

Thinking the receipt worth remembering, I copied it, and now send it for publication.

Take a potash kettle, or a large tub, and put into it:—

One barrel of lye of wood ashes; five pounds of white vitriol; five pounds alum, and as much salt as will dissolve in the mixture.

Make the liquor quite warm, and put as many shingles in it as can be conveniently wet at once. Stir them up with a fork, and when well soaked, take them out, and put in more, renewing the liquor as necessary. Then lay the shingles as usual.

After they are laid, take the liquor that was left, put lime enough into it to make whitewash, and if any coloring is desirable, add ochre, Spanish brown, lampblack, &c., and apply to the roof with a brush or an old broom. This wash may be renewed from time to time.

Salt and lye are excellent preservatives of wood. It is well known that leach-tubs, troughs, and other articles used in the manufacture of potash, never rot. They become saturated with the alkali, turn yellowish inside, and remain impervious to the action of the weather.

I hope the experiment will be tried. The expense is trifling, which is one thing in its favor. GRANITE.

Bloomfield, C. W., 2d mo., 19th, 1870.

REMARKS.—The use of salt in liquid for soaking shingles has been objected to on account of its causing the nails to rust. Sometimes the nails fail first, when the shingles are not soaked at all.

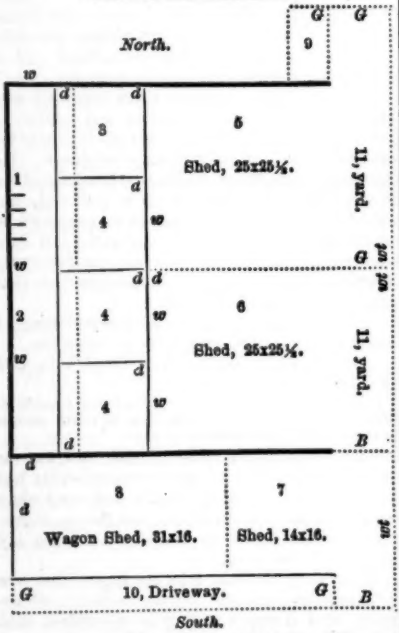
For the New England Farmer.

A CONVENIENT CATTLE BARN.

As I have seen several plans of barns, both for cattle and sheep, in your valuable paper, I send you a plan of one built in the summer of 1861.

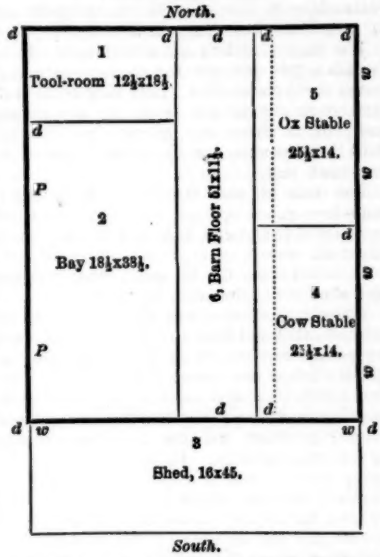
The barn is fifty-one feet long and forty-five feet wide, with a shed on the south end, forty-five feet long and sixteen feet wide, with one roof attached to the barn. The following is the

PLAN OF THE BASEMENT.



Explanation of Plan of Basement.—No. 1, stairway, 3 feet wide; No. 2, walk in front of the stable, 51x8½; No. 3, bull pen, 12½x13, including crib; No. 4, pens for young stock or cows, while foaling, 12½x13, including crib; No. 5, cow shed and yard; No. 6, ox shed and yard; No. 7, steer shed and yard; No. 8, place to store wagons, &c.; *d*, stands for door; *w*, for window; *wt*, for water troughs; *B*, for bars; *G*, for gates. The dotted lines represent the fence in the yard, and the crib in the stable; No. 9, walk for the cattle from the yard to the stable above; No. 10, drive way from the yard to the main road.

PLAN OF FIRST FLOOR.



Explanation of Plan of First Floor.—No. 1, tool room, 12½x18½ feet, with three doors and one window; No. 2, bay 18½x38½; No. 3, shed, 16x45, with two doors and one window over each door; No. 4, cow stable, 25½x14, including crib; No. 5, ox stable, 25½x14, including crib; No. 6, barn floor, 51x11½. There is a long window over each of the two large doors; *d*, indicates door; *w*, window; *P*, pitch-holes for passing hay to the walk below.

The barn is supported by a whole wall on two sides, banked to the top with earth. The posts are sixteen feet in length.

We intend to keep good stock in this barn. And if you, Mr. Editor, or any of the readers of the FARMER happen in this neighborhood we shall be pleased to show both the barn and the stock that are fed in it. H. BLACK.

Putney, Vt., Jan. 25, 1870.

For the New England Farmer.

THE "JOHN MORRILL" OR "WOODSTOCK" HORSE.

In your last issue an inquiry is made about the "John Morrill Horse." This horse was foaled in Barre, Vt., or in that immediate vicinity, in the spring of 1857. When one year and a few months old he was bought by

Moses Cheney, Esq., of Barnard, Vt., and taken to Bethel, and left in the care of J. J. Bowen, then of Bethel, Vt., now of Medford, Mass., who had a half interest in him. Mr. Bowen kept him till the latter part of the winter of 1861, when he became the property of John Robinson of Royalton. The colt was at that time merely "broken." Mr. Robinson, a drover, used him pretty constantly for a single driver till the September after he was four years old. At that time Mr. R. showed him for premium at the Windsor County, Vt., Fair, at Woodstock, and took the first premium in his class—the colt showing 3.12.

About that time Wm. C. Danforth, of Barnard, became principal owner of the colt, and took him to Barnard. Mr. D. kept him for stock purposes in his own and neighboring towns two seasons, trained him some, and exhibited him at the Windsor County Fair, when five years old, in time 2.54, and when six years old, at same Fair he was close on to Draco in 2.39½.

In March, before he was seven, he was purchased by Frederick Billings, Esq., of Woodstock, Vt., who kept him at White River Junction that season for stock purposes, and in the fall showed him at the New England Fair at Springfield, Mass., also at the Connecticut Valley Fair at Bradford, Vt., and Windsor County Fair at Woodstock, Vt. During this fall the horse was out of condition and did not do himself justice.

The next season I think he was kept for stock a short time, but am not sure. In the fall he was in fair condition, and though showed at several Fairs, I believe his best time was made at Woodstock, viz., 2 33.

The next season he was kept in train, and although showing high speed, he nowhere showed himself a reliable fast trotter. By this time from some cause he had acquired the habit of pulling hard and running some in spite of his driver. The horse is now in stable of Dr. F. Smith, of Stowe, Vt. It is said that the doctor has bought him of Mr. Billings.

John Morrill was bought by Mr. Billings for $4250, who changed his name to "Woodstock," by which he is now known. This horse is about 15¾ hands and weighs 1150 pounds. He is black all over,—as black as the blackest raven; is very strongly made and powerful in his movements. Under more favorable circumstances he might have been a more reliable trotter. That he is very speedy no one who knows him can doubt.

His sire was Young Morrill. His dam was by the Hood Horse; he by Carson Horse, he by "Quicksilver." The stock from John Morrill or Woodstock is excellent.

LEONARD T. TUCKER.

South Royalton, Vt., Feb. 21, 1870.

—Sulphur burned in a room is said to neutralize at once the odor occasioned by a skunk.

For the New England Farmer.

WINDOW GARDENING.---No. 3.

As the winter draws near its end, our "window gardens" require all the stimulants, sun and air, which we can give them. Sunlight, one of the most precious gifts of God, is essential to their growth—indeed, seclusion from sunshine is one of the misfortunes of our civilization. It fades our elegant carpets, furniture-coverings and curtains, —yes, and our daughters, ourselves and all who live under our roofs! In large cities, the parlors are shut up until a visitor calls, then a little light is allowed to enter. Such rooms are stifling to body and soul! Throw open the blinds, my friends, take down the gorgeous curtains, and bid the bright sunshine enter and enliven your home! Fill your windows with blossoming plants, and see how they turn to the glorious light which is so needful to our health and theirs. Many of our "olive plants" fade away, from living in dark, unhealthy rooms. Pale, and sickly are the girls that are reared in fashionable parlors. Expose them and your plants to the direct rays of the sun, and they will gain color, strength and health. Dyspepsia, and neuralgia will flee away under its life-giving influence. A slight digression from our subject, my friends, but we fear a needful one. Calla lilies are always beautiful, and much sought after at the blessed Easter service. They are of the easiest culture, and if rightly treated, can be in full bloom by the middle of March. They often refuse to blossom on account of the pot being clogged with the offsets or young tubers. Wet the soil thoroughly, run a knife round the edge of the pot, and turn it bottom side upwards over the hand. If the earth is filled up with small bulbs, take them out carefully, so as not to injure the long white, fibrous roots of the large bulbs. Fill up the pot with fresh soil, warmed through—*don't chill the roots!* Water it freely, keeping a saucer full of water under it. If the pot is placed in a pan of water so that it is nearly covered, it will bloom luxuriantly. In truth it is as easy to cultivate as a potato. Stimulate it with guano water or liquid manure twice a week, and soon the pure, white-sheathed bud will herald the glorious flower. Three to four blossoms can be produced on one pot of bulbs, by cultivating as many large bulbs in a place. We saw a forest of these pure lilies in bloom at a green house, last March. They were raised with special reference to Easter. The plants can be sprinkled by dipping a small brush broom into warm water and shaking it over them. A warm shower is thus produced, which washes away the dust so injurious to house-plants.

The growth of our "Window Gardens" is often checked by worms in the pots. They can be found by turning the pot upside down, giving the edge a sharp knock; the pot can then be removed, and the worms will usually be found on the outside of the soil, and can be picked out. Watering with lime water will often destroy them. Take a

pound, slack it in a pail with cold water; let it settle, then bottle and keep in a cool place, where it will not freeze; warm it before you turn it on the plants. It acts as a fertilizer as well as a worm destroyer. Wood ashes will also kill worms. Put a tablespoonful on the surface of a large pot—taking care not to touch the stem or leaves of the plants.

Insects seldom trouble plants which are often washed; but in parlors it is not convenient to shower frequently. A feather will brush off the green aphides, and by putting a newspaper under the pot, they can be burned up.

In England, the gardeners recommend washing the plants with alcohol water,—a tablespoonful of the former to four of water,—but the water itself will do the work as well. Summer showers keep our flowers free from them.

Red spiders will not always leave if plants are well watered; but a slight dusting of cayenne pepper routs them. Spread a paper over the surface of the pot to prevent its touching the soil, as it might injure the roots. Take the pepper castor, and dust the leaves and stems—in two or three days wash it off, and the spiders will not soon return. Bulbs always repay the cultivator. We have a glass dish filled with hyacinths which are in full bud. By watering them with warm water and a few drops of ammonia, we have doubled their growth. To a teacupful of water, add five drops of liquid ammonia. We filled our fernery this year with snow-drops, crocuses, anemones, colchicums, etc., and now it is a joy and beauty. Among the tall feathery ferns, the Lycopodiums, partridge vines, and green mosses, their bright flowers glow like tropical birds. No matter how dreary the weather, how few our visitors, we have "company" always. As we sit by the glowing fireside, we can gaze upon a miniature summer, though out of doors dread winter reigns supreme; and as I write, I feast my eyes upon its beauties, and wonder that all house-keepers do not avail themselves of the adornments which flowers offer to them. Costing but little, their influence is priceless! A fernery requires no attention—water is needed only once a month, so to those who dislike the daily care of flowers, it offers a floral treat without care. Mine is *home-made*—the tin man made the zinc pan ten inches by eighteen—the carpenter, the glass case which covers it—the whole expense was only $3.50; and it will last for years. The woods and fields provided the ferns, mosses, and vines, and with the bulbs blossoming among them, it is a "*rest for the weary.*"

The double geraniums are a "*novelty*" worthy of the attention of all lovers of flowers. They do not drop their leaves like the single varieties, and the clusters are very large and ornamental in bouquet or vase. *Madame Lemoine* is considered one of the most beautiful yet produced. Its leaves are handsomely zoned with chocolate, the flowers are very durable and of a bright rose color, and the tresses are enormous in size. $3 was asked for this rarity last year. This year it can be purchased for $1. *Triomphe de Lorraine* has immense, very durable flowers of a rosy carmine color, striped white; last year it was $1—now it can be had for fifty cents. *Triomphe De Thumesnil* is of a violet rose, shaded with carmine, and its trusses often boast of from fifty to sixty flowers. This rare "novelty" is seventy-five cents. Novelties, *en masse*, we are apt to class as *humbugs*; but these flowers are what they pretend to be, and worthy the attention of every florist. They come to us from the French florists, and are the results of the most careful hybridization. With a camel's hair pencil they deposited the precious pollen upon the stygma of another flower, and if but one more petal was produced, that flower was treated in the same manner. So after years of careful investigation and patient toil, they are rewarded by

"The bright consummate flower,"

and feel fully repaid for all their care. By this process, these perfectly double geraniums were produced; also the double *Zinnias*, *Asters*, and *Balsams*, which delight all florists and amateurs. While we write of these brilliant flowers, we can imagine them springing up about us, in all the luxuriance of summer, but a glance out of doors, shows us that—

"Gently as lilies shed their leaves,
When summer days are fair,
The feathery snow comes floating down,
Like blossoms on the air,"

and our visions fade away. S. O. J.

For the New England Farmer.

WINDHAM COUNTY WOOL GROWERS' ASSOCIATION.

The Windham County Wool Grower's Association met in Westminster East, Feb. 7th, and after a free and full discussion of the subject of wool growing and the working of the present tariff, if rightfully administered, also its effects under the present erroneous construction, adopted the following preamble and resolutions:—

Whereas during the year previous to the passage of our present Tariff great inducements were held out to capitalists to enter largely into the importation of foreign wool and woolens, with a view to get their goods into our markets under the old Tariff of low duties and hold them until after its passage, and

Whereas such vast importations were made as to cause a glut in all of our markets, and a reduction in prices of wool and woolens to such an extent as to seriously cripple these two great interests; and had it not been for the intervention of our Tariff, passed in March, 1867, the Wool Growing interest would have speedily been annihilated, and

Whereas Wool Growing is one of the material products of this our Commonwealth, and from its adaptation ought to be one of the leading pursuits of its citizens as it has been heretofore, and

Whereas the prices of domestic wool under the operations of the present Tariff, as now administered, do not pay for its production in this section of our country, and can be remunerative in no considerable portion thereof, and is fast being abandoned, and

Whereas by the ruling of the head of our Treasury Department, a very important and essential proviso in

rendered null and void; whereby foreign wool of all qualities (except Merino and English blood wools) are now admitted into our ports at low nominal duty of the third class wool,—therefore,

Resolved, That in the opinion of this Association, and in view of the foregoing facts, the usefulness of our existing Tariff has been partially crippled and diverted from its proper channel, we as "Wool Growers," would very respectfully ask for a continuation of this Tariff upon the principles on which it was framed, by the joint committee of Wool Growers and Manufacturers in convention mutually agreed, believing that upon a further and fair trial, it will prove advantageous to the best interest of our country.

Resolved, That we regard the annual reports of Commissioner Wells of the revenue in many respects erroneous, not warranted by facts, made in the interest of free trade, detrimental to the industry and best interest of our country and calculated to cherish and foster foreign labor and foreign trade to the expense of our own.

Resolved, That the importation of over 7,000,000 lbs. of third class wool into the city of New York alone during the year following the unfavorable decision of our Treasury Department, over the previous year, when the law was partially executed as its framers intended, *conclusively* proves that the "Wool Grower" does not receive the full benefit of the "Tariff" as intended by its framers.

Resolved, That the manufacturers of wooled fabrics who are realizing all the protection under the present law as now construed, should be entitled to no more, at the expense of the Wool Grower, and should not have the privilege of purchasing foreign clothing wool in our own markets for less price than it costs to produce the domestic of like quality.

Resolved, That Congress should by a plain, brief, specific statute make it peremptory upon the appraisers at the Custom Houses, to place all wool not clearly designed as carpet wool (third class in present law) in the second class, to be treated as clothing wool and subject to the duties thereof.

Resolved, That the Secretary be directed to furnish a copy of these Resolutions to each of our county papers, also to each of our members of Congress, with a request to move for a remedy in this matter, if in their judgment there is a reasonable hope for success.

M. W. DAVIS, Secretary.

Westminster, Vt., Feb. 24, 1870.

CHEESE FACTORIES OF MASS.

In addition to the notice published in our last of the proceedings of the Convention of Massachusetts cheese makers at Hardwick in Worcester county, we publish the following from the report of the Secretary of the Board of Agriculture published in the Massachusetts *Ploughman*.

On Wednesday, after the election of officers, the reports of Cheese Factories were read as follows:—

Hardwick Centre Cheese Factory.

Capital invested $4250; 42½ shares, all sold and paid for, and surplus of $931.28 for repairs, &c. Commenced making cheese April 1, closing November 23; amount of milk used, 2,224,023 pounds, being about 9⅝ pounds of milk used to one of cheese made; cheese kept 30 to 40 days before marketed; each eighteen inches diameter, weighing 74 pounds; help, two males and one female; cost of help, including board, $1592 90; 1017 rennets cost $271; 2900 boxes cost 30 cents each. Use Ralph vat, with wood; burned 11¼ cords of wood, costing $59; coal in dry room, cost $104; used 21 barrels and 4 sacks salt, costing $105; expense of freight and marketing, .61⅞ cents per 100 pounds; amount of salt per 1000 pounds milk, 2⅝; amount of cheese cured, 230,792 pounds; net income per 100, $15.50; average price of cheese in market, 17.849; average price to milk contributors, $15.447. Whole expense of everything, $2.301 per 100 pounds.

Barre South Cheese Factory.

Capital $5200. Commenced April 1, closing November 17. Pounds of milk used, 1,211 578, being 9¾ pounds milk to each pound of cheese cured. Kept on average five weeks before marketed. Average weight 75 pounds each. Help one man, seven months, two men six months, three men, three months. Cost of help $971.73. 521 rennets cost $135. 1573 boxes cost 30 cents per box. Ralph vats used in heating. Fuel cost $109.69; salt $57.05; expense per pound in getting cheese ready for market .0216; expense of freight and marketing, $.66 per 100 pounds; 42 ounces salt per 1000 pounds milk; 124,122 pounds cheese cured; net income per 100 pounds, $15.18; some of whey sold for 20 cents per barrel. 44 hogs kept on whey, &c.; they cost in spring, live weight, 14 cent per pound. Net profit on hogs $200.

New Braintree Cheese Factory.

Capital $9000. Commenced making April 1, closed November 29; 2,152,004 pounds milk used, being 10.2 pounds to one of cured cheese; kept four to eight weeks before marketed; two sizes, 18 by 8 inches and 16 by 5 inches, weighing respectively 82 and 36 pounds each; help, one male and two females all the time, and one man 5¼ months; cost of help, $1 343.50; 627 rennets cost $157.75; 2617 boxes cost $706 50; 1667 yards cloth used cost $197.59; 42 cords wood cost $222 35; 8¼ tons coal cost $112.72; 28 sacks salt cost $105.75; expense per pound in getting cheese ready to send from factory .186; expense of freightage and marketing $1,063.03; 2¼ pounds salt used per 1000 pounds milk; 210,980 pounds cheese cured; net income per 100 pounds $14 54; average 500 cows per month; average 420 pounds cheese per cow; 60 hogs kept cost $1 311.55; corn and meal fed to hogs cost $493.28; 59 hogs were sold at from 14½ to 15 cents per pound dressed, and with the lard amounted to $2,775.84. Whole cost of everything in keeping the hogs $2,122.21; net balance in favor of hogs $653 63. The hogs were fed some corn with the whey the second week in May, when they were bought; commenced feeding meal August 15.

Worcester County Cheese Factory.

At Warren—Capital $5200; commenced making April 12; closed November 6; 1,337,998 pounds of milk used, being 9¼ pounds to each pound cured cheese; 2060 cheeses made, costing $998.70; 477 rennets cost $95.40; help, two males, one female; 2.60 boxes cost $618; 1075 yards of cloth used, cost $113 25; 27 cords of wood used cost $95; 2 tons of coal $22; salt $55.50; all other expenses $1,138.30; expenses per pound getting cheese ready for market 2¼ cents; 216 pounds of salt per 100 pounds cheese; 140,718 pounds of cheese cured; net income per 100 pounds $15.044; average 385 cows per month; 365¼ pounds of cheese per cow.

Coy's Hill Factory.

Warren—Capital $6000; commenced working April 1st, closed October 1st; 1,122,258 pounds of milk used, being 9 355 pounds of milk to one pound of cheese cured; average weight, 80 pounds each; help, man and wife; cost of help $970; 481 rennets cost $89 89; 1462 boxes cost $433 22; 1113 yards of cloth cost $112.26; Miller's circulating coil cheese vat used for heating; 13¼ cords of wood cost $67.50; 3495 pounds of salt $43.50; 119 980 pounds cured cheese: net income per 100 pounds, $16 33.

Belchertown Cheese Factory.

Capital $1200; commenced making May 24, closed September 11; 226,247 pounds milk used, being 9½ pounds to one of cheese cured; kept twenty-five days before marketed; 411 weighed 56 pounds each; and 175 about 13 pounds each; help one male all the time, one female one-half the time; cost of help $100 per month; 60 rennets cost $10; cost of cloth $25.00; 5¼ cords wood cost $21; 23 818 pounds cured cheese; cheese sold on average at 16 cents per pound.

Greylock Cheese Factory.

At South Adams—Commenced April 15, closed December 1; 1,140,075 pounds milk used, being 9.6 pounds milk to one pound of cheese cured; kept 60 days before marketed; average weight 78 pounds each; help, one male and one female; cost of help $540; cost of manufacturing per 100 pounds $2.00; amount of cheese cured 118,233 pounds; 1500 yards of cloth used; 17 sacks Ashton salt, cost $4.70 per sack; 12 pounds annatto, $20; 1514 boxes cost $484.48; whole expense of manufacturing, including freight and marketing $2,444.93; net income per 100 pounds $14.67; average 408 pounds cheese per cow.

In the following, only partial reports were made, the cheese not being all sold:—

Barre Central Cheese Factory.

1,890,674 pounds milk, 194,966 pounds cheese; average 9.69 pounds milk to one of cheese cured.

Barre South West Factory.

361,075 pounds milk and 36,000 pounds cheese.

Petersham Factory.

373,554 pounds milk; being 9.95 pounds milk to one of cheese cured.

Prescott Factory.

Capital $2000; 334,723 pounds milk and 33,472 pounds of cheese, or 10 1-6 pounds of milk to one of cheese; whole expense, $1160. Commenced making May 10, closed October 10; help, one man, $75 per month. Kept eighty cows.

Oakham and Hardwick Cheese Factories.

No report.

The President having brought the subject of the Government tax on butter and cheese, before the convention, a committee consisting of A. H. Holland, of Barre; N. S. Johnson, of Dana; D. S Ellis, of Warren; W. A. Warner, of Hardwick, and Mr. Hall, of Greenfield, were appointed on resolutions, who reported the following, which were adopted:—

Resolved, That the officers of this Association be and are hereby instructed to petition Congress that the revenue laws of the United States be so amended that the manufacture of butter and cheese may be exempted from taxation.

Resolved, That the thanks of this Association are hereby tendered to Messrs. Flint, Hyde, and Goodman for the able and instructive addresses with which they have favored it.

Resolved, That the thanks of the Association be tendered to the citizens of Hardwick for their courtesy and attention on this occasion.

ORCHARD GRASS IN KENTUCKY.—A correspondent of the Lexington *Farmer's Home Journal*, Mr. Richard Waters, of Goshen, Ky., gives a favorable opinion of this grass in his section. He says it is extensively grown in the north of England and Scotland under the name of Cock's Foot, from the resemblance of its top to a cock's foot. In Kentucky it is sown from the first of January to first of April. He prefers to sow it after corn, 20 pounds of seed to the acre, with about three quarts of clover. Should be pastured hard to tread the land. Rightly managed and on good land—would not sow on light loam or sandy land—he says it will afford a quarter more than Timothy, bluegrass, herdsgrass, or clover. It is of very rapid growth, and is a permanent grass. If cut when first in bloom, it makes good hay; but if suffered to ripen, the stalks become too hard. In open woodlands, where weeds or briers will grow, the orchard grass thrives well. He sows on such lands thirty pounds of seed per acre, and by feeding shelled corn scattered over the land, from day to day, makes his hogs harrow in the orchard grass seed. Commences to pasture as soon as the grass is two inches high, and pastures close to cause it to form a sod. He says it will grow under the shade of a beech tree. Cattle fatten rapidly on this grass.

—The State of California has 800,000 peach trees, enough to produce more than 100 pounds of fruit annually for every person in the State.

DIANTHUS HEDDEWIGII DIADEMATUS.

We present on the opposite page a fine representation of one of the latest novelties in the flower garden. The dianthus belongs to the same family as the Carnation, Picotee Pink, and Sweet William. It is of Japan or Chinese origin, and may be regarded as among the most beautiful and effective of our hardy annuals. The recently introduced species, the *Dianthus Heddewigii* and *Laciniatus*, with their large and rich colored flowers, three to four inches in diameter, close, compact habit, and profusion of bloom, are unsurpassed for effectiveness in beds and mixed borders. In Breck's *Book of Flowers*, we find the following description of these flowers:—

Mr. Heddewig, the originator, gives the following account of their origin:—"I had the fortune to raise from Japan seed, a new splendid Pink, which Dr. Kornicke describes already in Regels Gartenflora as *Dianthus laciniatus*. I raised last year 800 seeds from it, which I sowed early; and already at the end of May they commenced to display their most magnificent flowers, of a diameter of four inches. I was greatly rejoiced to see a part of them of splendid, dense, double flowers, in the greatest variety of colors, viz.; pure white, rose, lilac, carmine, crimson, purple-violet, the darkest black brown, spotted and striped; a splendid sight, far beyond description. August 3, 1859, I exhibited 18 plants in as many different varieties, and received the highest reward for novelties, 'The Golden Medal,' from the Imperial Horticultural Society. This Pink grows two feet high; the small leaves have a length of four inches, and the double varieties, from their dense double form, and the laciniate petals, somewhat resemble the flower *Papaver pæoniflorum*. Some plants endured our last Russian winter without being covered." I have had the pleasure, adds Mr. Breck, of cultivating these novelties since 1861, and find them to correspond nearly with these descriptions. I have not had any that attained a greater height than a foot, or foot and one-half, but have had all the shades of color mentioned by Mr. Heddewig. The foliage is somewhat glaucous and lanceolate. Both varieties produce double flowers. To ascertain whether they would survive our winters, I protected a large bed of them with leaves in the autumn of 1864, and they came out bright in the spring of 1865 and flowered superbly during the summer. If they are not hardy enough to stand the winter without covering, they are very valuable acquisitions to the flower-garden as annuals. Like the China Pinks, they are destitute of fragrance.

The particular species shown in our engrav-

DIANTHUS HEDDEWIGII DIADEMATUS.

ing, the "Double Diadem Pink," is described in Washburn & Co.'s catalogue (from which we copy) as a striking novelty of wonderful beauty. It differs from the *D. Heddewigii*, being more luxuriant, compact and dwarfish; its flowers have a diameter of two to four inches each. They are regular, densely double, and have all tints, from lilac, crimson and purple, to the deepest black purple.

Our lady readers who may be inclined to try these flowers will find them of easy culture, and very satisfactory in their appearance.

NEW PUBLICATIONS.

THE AMERICAN NATURALIST, a Popular Illustrated Magazine of Natural History. Edited by A. S. Packard, Jr., E. S. Morse, A. Hyatt, and F. W. Putnam. Vol. III. Salem, Mass.: Peabody Academy of Sciences. 1870. For sale by Crosby & Damrell, 100 Washington St., Boston. $4 a year.

The February number completes the third volume of this work, and furnishes the title-page, index, &c. "Skates' Eggs and Young," "Notes on some of the Rarer Birds of Massachusetts," "Our Common Fresh Water Shells," "What is Bathybius?" are among the illustrated articles in this closing number of the third volume of the *American Naturalist*. The twelve monthly numbers make a volume of nearly 700 pages, with eleven plates and 102 wood cuts, forming an illustrated encyclopædia of natural history of a non-technical character, designed for the student, the farmer and for the general reader who is interested in the mysteries of nature. We are pleased to notice that the publishers propose to give eight pages of reading matter in each number for the next volume, which commences in March, more than was given the past year. We invite parents and others who question the influence of the "light literature" which is now so abundant in nearly every family, to consider the claims of this publication on their patronage.

BARNS, OUTBUILDINGS AND FENCES. By Geo. E. Harney, Architect, Newburg and Cold Springs, N. Y. New York: Geo. E. Woodward. Engraved and Printed by Korff Bros. Quarto, $10.

Our readers who have had an opportunity of seeing wood-cut illustrations in newspaper print of Mr. Harney's taste, skill and judgment as an architect, will be curious to see fine lithographic representations of the same, on clear paper, and in elegant book form. This volume contains a series of 120 original designs and plans, with descriptive matter, for the different kinds of outbuildings required on farms and village lots. It is divided into three sections. The first comprises stables; the second, wood-houses, workshops, poultry-houses, ice-houses, &c.; the third, rustic and finished fences and gate-ways, covered gate-ways, carriage-gates, gate and gate-house combined, rustic stables, summer-houses, well-houses, &c. We notice that one whole page is devoted to an illustration of "a new method of hanging up harness," which not only pleases us much, as we have had so much trouble in keeping our harness in place, but illustrates the minuteness of detail which characterizes these designs and plans. If the book is too costly for individual farmers, we would call the attention of the library committees to this splendid volume. It is for sale in Boston by A. Williams & Co., at the corner of Washington and School Sts.

—A correspondent of the *New York Rural* recommends the following lotion for chilblains; 1 drachm tincture of opium; 2 drachms tincture arnica; 1 drachm best oil of peppermint.

For the New England Farmer.

WINDOW GARDENING.—No. 4.

Now the wild March winds roar through forest and vale—and they have their work to accomplish—they prepare the soil for the farmer and gardener. It has been said that "a bushel of March dust is worth a king's ransom." It indicates that there has been drying winds, and in April the fields will be ready for the seed. Another proverb runs thus: "A dry, cold March never begs bread." And still another: "A wet, warm March makes a sad autumn." So we will hope that high winds may prevail, and make ready the gardens which will nurture our "window pets" and annuals.

For the past week the seedsmen's catalogues have attracted our attention from our "Window Gardening." Five cents will purchase a packet of seeds which may produce fifty fine plants—ten for a cent; one dollar will buy twenty different kinds. Only the poorest hovel need be without its flower garden, as well as vegetables. The only novelty we especially desire is the *Diadem Pink* of which you gave your readers such a tempting illustration. Fifty cents must be expended for that, at any rate.

If our plants have been carefully tended, well watered, stimulated and washed—*freed from all clogging dust*—this month tells the story to all passers-by. Their gorgeous blossoms fully repay all our cultivation. *Bedding-out geraniums* are now vieing with tropical birds in the color and size of their clusters of flowers. Tom Thumb "*Lady Mary*," purely white with red anthers, turns its snowy flowers proudly to the sunlight. "*Gen. Grant*," the *ne plus ultra* of the Scarlets, rivals all its compeers. "*Herald of Spring*," with its trusses of cherry-red is worthily named. *Christine*, a bright rosy pink, vies with the color of June roses. *Bicolor*, with a salmon pink centre shading to white is very lovely. All the Tom Thumb varieties are desirable for house culture; they make such stocky plants, and are covered with such large clusters of flowers. We possess nineteen pots of different colored geraniums, and nearly all are budded, or will be soon. By the last of this month they will be in a blaze of glory, and when the summer is here they will fill a mound with their green leaves and bright flowers. There is no plant more adapted to amateur cultivation than these so-called bedding-out or *Zonale Geraniums*. No *aphides* approach them, even the detestable red spider keeps at a distance. The foliage of many of them is very ornamental, though the variegated-leaved geraniums do not produce beautiful flowers. They blossom, but the flowers are inferior. Still they are a decided addition to a "window garden;" some of the new varieties are very ornamental—nothing can exceed the beauty of these interesting "sports." *Mountain of Snow* has pure white

margined leaves. *Queen of the Queens* possesses bright green foliage with a silvery white margin. *Mad. Pollock* maintains her *prestige*, and is much sought after. Its bright red zone shades into crimson, and is edged with golden yellow. *Golden Vase* has green and golden foliage. *Sunset* has tri-colored leaves. Space would fail us to enumerate all the "beauties" offered to us by the florists, and all of us must have some of them. The leaves are unrivalled for bouquets and vases, and the plants are of most easy growth.

In this month, we must give our "pets" all the fresh air that is possible. If the room is unoccupied, open the windows for two or three hours in the warmest part of the day. If our readers have used the fertilizers which we have recommended, their plants must be growing rapidly now. It requires but little skill to grow a plant fast,—stimulating liquids, good compost, and a warm room will always do this; but remember the faster a plant grows, the wider apart are the leaves, the more stem there is, the more distant the lateral branches, and the more gawky the plant! The skill of the gardener is shown in producing a plant of the best form that it can be grown. Beauty in foliage can never be attained when the leaves which should fill a foot in space, are stretched out to a yard, and the clusters of flowers that should grace a plant two feet in height, are scattered over two yards of half-naked stalks. Slower growth is obtained by lowering the temperature at night, when there is no danger of frost. Shut out the furnace heat entirely, or open the doors and cool off the room. By thus reducing the warmth, and giving all the fresh air which is possible,—and be careful not to water too much, allowing no water to remain in the saucers of any plants but *Calla lilies* and *Lobelias*,—a fine, compact habit can be obtained.

It is this peculiarity which makes the "*Tom Thumb*" class of plants so desirable. By careful hybridization they have been produced, and we have *Tom Thumb Geraniums*, *Asters*, *Tropœolums*, *Stocks*, *etc.*, *etc.* As yet no florist has produced a *Tom Thumb Fuchsia*, but we yearly look for its advent. There is a Fuchsia so called, but it has small flowers. In selecting plants, be sure to choose all the Tom Thumb varieties, for they will never disappoint your expectations. They are *novelties* much to be desired; so when our readers inspect the seed catalogues, let them remember this word of advice.

We have given a variety of receipts for liquid stimulants, but have just heard of another, which those who dislike the odorous compounds, heretofore recommended, may like to try. It is sulphate of ammonia, and is thus prepared: Dissolve two ounces of carbonate of ammonia (common smelling salts) in a pint of water, and then drop in sulphuric acid (oil of vitriol) until all effervescence or bubbling ceases. A tablespoonful of the solution of sulphate of ammonia mixed with one gallon of warm water is a most efficacious liquid manure, and not at all disagreeable to use in any parlor or chamber. It should be applied, at first, once a week, then every four or five days.

We wish that we could inspire every woman and child with a love for flowers and their cultivation. It is the healthiest and purest of pleasures, and soon the amateur becomes intensely interested and entertained. In the country, this pursuit will while away many an hour, and confer great benefits upon the florist. Our daughters are suffering in mind and body for open air and exercise The garden offers them all this and infinitely more. The English ladies have devoted their morning hours to gardening for many years. They are not afraid of the trowel or the rake, nor of soiling their dainty fingers, and their fine rosy complexions and robust figures attest the vigor and health these occupations have imparted. But these are not all the blessings conferred by gardening:—

"Not a tree,
A plant, a leaf, a blossom, but contains
A folio volume. We may read, and read.
And read again; and still find something new,
Something to please, and something to instruct,
E'en in the humble weed."

S. O. J.

SCALDING MILK VESSELS.

It used to be the practice to scald milk pans and milk pails, and it is the practice yet.

Why is it done? There is no "science" about it; philosophy has not led to it. What is it then that induced people to engage in what they didn't understand, yet, which was and is a great good? It is experience. It has been found that scalding a vessel with hot water will have an effect that cannot otherwise be obtained.

What is that effect? Simply the destruction of little spores of fermentation, which propagate rapidly in dirt, and in the least dirt, so little that it cannot be seen (with the naked eye.) Experience led here, and philosophy followed to corroborate it.

You cannot cleanse a vessel, then, without hot water. And this water must not only be smacking hot, biting your hand, but it must be absolutely boiling hot, up to the point. Then you will kill all the live animalculæ; otherwise, you will not.

And when the vessel is thus treated—cleaned first, and scalded afterward—set it away to dry, and do not touch it again till it is wanted for milk. Milk, remember, is a powerful absorbent, like charcoal, or plaster, or earth; and it will hold what it gets, improving on the rankness. In winter this is less the case, yet it is the case; in summer it is all important to attend to it.

How necessary then to see that the hands having the handling of milk in charge, are to

be trusted. This is as necessary as anything, and is the first necessity—the necessity on which hang the rest.

The dirt being away, the air must be pure. This you cannot scald; you must therefore resort to other means—and these means are, not a confined bad air of the cellar or milk-rooms, especially foul with vegetable odors; nor the aroma of the dunghill; the rank, urinal steam of the stables; nor in the case of a cheese factory, the proximity to a pig pen; but an avoidance of all of them—for these things will as certainly effect the milk as the dirt left in the pan.

An absolute freedom from everything that is offensive in ordor or flavor, is the requisite to prime cheese, or a first quality of butter. Who has not detected the common taint of the stables in milk and cream? Can this be endured?

Butter kept in the room over night with the family (in winter,) is not fit to use. It has absorbed so much of the odors that it has become foul. The taste of the bad air is plainly perceptible. But cover your butter plate (not an old one) with a tight dish—say a tin basin, and your butter will be found much the same as when placed there. It is, however, only perfect when *kept*—not occasionally put—in pure air. House-keepers take note. When once tainted it can never be cured, but tenaciously holds all it has, and gets all it can. Like charcoal, or gypsum, or earth, it is a powerful absorber. From the time it is gathered in the cow until it is eaten in the family, the greatest care must be given to the lacteal product. Not only that, it reaches still farther; the food, the water, must not possess the odor. But generally the worst is in the vessels and the atmosphere that comes in contact with it. These, at least if impure, impart their impurity, however pure the milk may have been before.—*Western Farmer.*

EXTRACTS AND REPLIES.

TEXEL SHEEP.

Do you know anything further than what was published sometime since in regard to the Texal sheep? Perhaps some of your correspondents have tried them; if so, will they please report in your paper. Some coarse wooled bucks of some breed are needed in this section, and if owners of such stock would advertise, stating price, it might prove a benefit all round. H.

Martha's Vineyard, Mass., Feb., 1870.

REMARKS.—Something over a year ago, R. H. Hughes, of Abington, Va., in a communication to the *Farmer's Gazette*, Richmond, says, "When I saw the Patent Office account of the Texel sheep, I thought I recognized the breed which we needed in South West Virginia, and ordered a pair of them. It was in 1866. In form they resemble the Southdown; in fleece, the Cotswold; in hardiness, the Merino. They are a large sheep, and should not run in flocks of more than a hundred. The staple is not less than seven inches long; often much longer; and in the full-bloods is glossy and flowing. The ewes are capital nurses. The oldest mutton I have from them are yearling half-breed wethers. These have never had grain, but I am sure that their flesh will, in flavor and tenderness, compare with any mutton that is to be procured. My full-blood ram is now five years old; and the full-blood ewes four years. They continue to grow and improve at these ages. At two years old the average weight of the grass-fed mutton would exceed a hundred pounds net; the half-blood yearlings now weigh from sixty to seventy-five pounds net." Mr. Chauncey B. Thorn, of Skaneateles, N. Y., in a letter to Mr. Chenery, says, "their wool is rather ahead of what I was led to expect. One of my ewes sheared eight and one-half pounds, weight of carcass eighty-six pounds, showing samples eleven inches in length, and its fineness and lustre comparing favorably with the best Cotswold samples which I have been able to procure at our State Sheep Exhibitions." Who, nearer home, has tried the Texels?

MALFORMATION IN A HEIFER'S TEAT.

I have a heifer with an extra orifice half way up one of her teats. What can be done for it?

Braintree, Mass., Jan. 26, 1870. G. H. A.

REMARKS.—The indication to be fulfilled in this case is to obliterate the extra orifice and the pipe which leads from it to the natural duct or pipe. This can be done only by exciting what surgeons call *adhesive inflammation* by the use of caustic or cautery. A strong solution of nitrate of silver, or of corrosive sublimate may be introduced into the unnatural opening, by means of a *tent* or a piece of cotton or linen cloth, made so small that when twisted hard it can be introduced the whole length of the abnormal pipe. This tent should be kept in until matter discharges from the opening, withdrawing and wetting it with the solution once or twice a day.

The quickest way, however, and perhaps the best one, will be to measure the length of the pipe, and then thrust into it a hot needle or wire. In either case, care must be taken that the natural duct or pipe be not injured.

OVERFLOWING OF GALL AND LIVER COMPLAINT.

On reading the statement in relation to a sick cow by your Rhode Island correspondent in the FARMER of Nov. 27, I mistrusted that the disease was misunderstood, and thought that she died of overflowing of the gall and liver complaint. With this impression I wrote to Stephen Leavitt of Livermore, Me., a very skilful veterinarian, asking his opinion of the case and requesting him to give me the symptoms of overflowing of the gall and liver complaint, and also the proper treatment of that disease. His opinion corresponds with mine, and he wrote me as follows:—

"In the first stages the hair is rough on the sides and appears to have changed color. If you take up a handful of the hide near the back bone the creature will flinch as quick as if you had stuck a sharp pointed knife into its hide; its skin is also hard and stiff and sometimes it will crack. In

the morning you will notice a yellowish matter in the corner of the eye or just below on the face, and sometimes about the mouth. The movements of the cow are like those of an old person troubled with the rheumatism, and the appetite is poor, with dull eyes. If at pasture, the animal will be found alone in the woods, or near some wet place or water in the shade, and now for the first time many will begin to suspect that the animal is unwell, and in two or three days they will have a hide to sell. If examined after death, the gall will be found very much enlarged, and filled with a thick, dark colored matter and the liver increased in size, and so rotten that it will be difficult to take it out without breaking it.

As a remedy, in the first stages, I should give half a common saucerful of soot taken from a chimney with an open fire-place, powdered fine, and mixed with shorts or meal, if they will eat it; if not, mix it with water and pour it down; also one tablespoonful of sulphur. If a creature gets as far along as the one described in the FARMER, I should in the first place give one pint of hog's lard, then half a saucerful pulverized soot dissolved in warm water, then one half pint of New Rum or whiskey, and then a tablespoonful of cayenne pepper. Give the above medicines as fast as they can be prepared. Then take a few quarts of beef brine, and with a woolen cloth rub the animal smartly about the back, and loins, and legs. Some spirits and cayenne added to this will make it better. Put her feet under her and change sides frequently, for the convenience of rubbing her. Give from a gill to a half pint of spirits every half hour for two hours and rub smartly; do the work faithfully and get up a perspiration. Be ready, if the animal makes an effort to rise, to assist her. You might as well pour medicine into a hollow log, as to give it to a dumb beast that is down, limbs stiff and cold, circulation slow and morbid. If you are lucky enough to get the animal on her feet, follow up the soot at the rate of two or three tablespoonfuls, with one tablespoonful of sulphur a day, until the animal becomes well enough to eat; then powder up the soot and mix it with the sulphur in meal or shorts for a number of days."

This liver complaint comes on slowly; in some cases it exists for months, and the cure is proportionately slow. WM. SWETT.

South Paris, Me., Feb., 1870.

PREMIUM BUTTER.

The first and second premiums offered by the Orleans County, Vt., Agricultural Society were awarded to Thomas Baker, of Barton, of whose Dutch cattle and farm buildings some account was published in the FARMER in 1868. (Monthly, page 332.) The following is his statement of his method of making butter.

I milk twenty-four cows. This season they were turned into the mowing fields the 10th of September, and their food was mostly clover. This butter was made the week ending September 18. The cream is skimmed when the milk has set thirty-six hours; we churn three times a week, but the cream is not churned the day it is taken off. When the butter comes it is washed until the water is not colored by milk; then the butter is taken out of the churn and put in a butter worker and the salt worked in—one ounce to a pound, using Ashton salt—then pack immediately in spruce tubs holding fifty pounds each, prepared for use by soaking them with warm water in which a spoonful of saleratus is dissolved for two hours; then the water is turned off and the inside surface sprinkled with salt, when the tub is ready to receive the butter, which is packed as solid as possible.

The tub that took the second premium was not packed immediately, but was set aside twenty-four hours, then worked again. This is our practice, if butter comes soft.

In summer the cows are milked as regularly as possible at 5 o'clock A. M., and 5 P. M. They are driven *carefully* to and from the pasture. They are fed salt every Monday and Friday.

Irasburg, Vt., Feb., 1870. Z. E. JAMESON.

PURE BRAHMAS AND MUSCOVY DUCKS.

Below, please find my yearly account of poultry. You will see that I can make it profitable without charging $2 or $6 per doz., as I see some of my townsmen advertise in your worthy paper.

Stock Jan. 1, 1869.		Dr.
38 Fowls at 75c, $28.50; 13 Ducks at 75c, 9 75	$38 25	
4 Guinea Fowls, $2.00; 20 Chickens, 6.00, 8.00		$46.25
Cost of Food.		
42 bushels corn, $46.60; 29 bushels oats, $24.25	$70 85	
24 bush. meal, $25 95; 24 bush. C. corn, $25 95	51 90	
36 bush. shorts, 14.45; 2 bush. barley, $3.00	17.45	
221 lbs scraps, $3 66; squashes, $2.50	6 16	
C. pepper, 50c; sulphur, 74c, rat exterminator, 25c	1.49	
34 doz. and 8 hens' eggs set, at 39c	13 51	
18 doz. and 8 ducks' eggs set, at 49c	9.16	
		$170.51
Other Expenses.		
W. brush, 37c; nails 35c; labor on coop, 14.12	14 84	
Painting and glazing windows,	3 23	
Dressing poultry,	5.50	
		$23.57
		$240.33
Stock Jan. 1, 1870.		Cr.
32 fowls, at 75c, $24 00; 12 ducks, at 75c $9.00	$33.00	
118 chicks sold, $71.24; 144 ducks $96.43	167.67	
171 doz. and 2 hens eggs, $67.45; 15 doz. and 3 ducks eggs, $7.50	74.90	
28 bbls. manure, $29 75; feathers $1.	30.75	
62 doz. and 3 hens' eggs used in the family at 39c	24.28	
5 doz. and 7 duck eggs at 49c	2.79	
		$333.30
Expenses,		240.33
Profit		$92.97

Eggs and poultry used in the house I charge the same as those sold to be marketed. I have now two broods of chickens,—19—hatched February 12th and 15th inst. JOHN BUFFINGTON.

Salem, Mass., Feb., 1870.

PATENT MANURES AND MEADOW MUCK.

While sitting by the stove reading the FARMER, I see that a man wrote very favorably of meadow muck. Sir, I have farmed for twenty years, and I have tried muck in every form without seeing any benefit from its use. I worked for a man one season that had "muck on the brain." He wanted me to try an experiment on corn with manure, and with muck. I did so. I planted half an acre with manure and half an acre with two-thirds muck and one-third manure. The result was that from the half acre that I manured I got my corn; while from the half acre with the muck I got nothing.

I think that all the patent manures are good for nothing. If a man who has no other income than his farm, buys these patent manures, he will soon run his farm and himself into the ground.

A neighbor of mine goes in for muck and glue-

stock manure mixed. He used it last season and you should have seen his crops. Three or four years ago he ploughed up about four acres of land in the fall, and had a man drawing muck all winter, and covered his four acres all over. He planted it in the spring with corn, and took good care of it. In the fall he found his labor was in vain. His corn was from six to ten inches high, but without one ear of corn. Then he ploughed it up again and seeded it down to grass. The next season, to his surprise, there was a crop of Roman wormwood, and that land remains in the same state now; but he is going to try another medicine, called fish guano, in which I have as little faith as in the many other nostrums we hear of. In my opinion Professor Heywood's salt and plaster is worse than nothing. The only way to farm it that I know of, is to put under your crops the best stable manure, and take good care of them. By so doing you will get a good harvest. But I will not write any more at this time.

O. J. UPHAM.

Needham, Mass., Feb. 12, 1870.

REMARKS.—We like such square expressions of opinion and experience, whether they tally with the "authorities" or not. We think our correspondent must have experimented with poor muck, or rather bad muck, as it seems to have destroyed the virtue of the manure with which it was mixed.

PROFITABLE PIGS.

As the Norway oat and early potato fever has probably passed its height, may not farmers, while looking for the explosion of these and sundry other humbugs, consider the old subject of pork raising. Pork and pigs now command good prices, and I will give a statement from which you can see whether it will pay or not. A year ago last December, we bought a white Chester County pig for $12. She weighed about one hundred pounds. She will now weigh more than three hundred pounds. Last spring she had a litter of pigs, of which I sold six at four weeks old for $30, and had one left that I dressed when seven months old that weighed two hundred and fifty pounds. The last of October the old sow had another litter of seven. When they were five weeks old I sold two of them for $10; the two weighing forty-eight and a half pounds. I sold one more at eight weeks old, for $8 and one at nine weeks old for $8.50, and we have now three left that are good for $10 each. We shall keep the mother of these pigs another year. The amount of sales and value of pigs on hand stand as follows:—

6 pigs at four weeks old,	$30.00
2 " five " "	10.00
1 " eight " "	8.00
2 " nine " "	8.50
1 dressed, seven months o.d, 250 pounds	35.00
3 pigs on hand,	30 00
	$121.50

In the above statement I have not added anything for the gain of two hundred pounds on the old hog, nor the expense of keeping.

HIRED HELP.

In relation to hired help, much depends upon the farmer that hires, whether he will be about with his help or not. Most farmers want a man that knows how to do all kinds of work, and how to do it well; one that can take his axe and go into the woods and cut wood or mend a piece of fence, or take his scythe, pitch fork, or hoe and go into the field and do a good day's work; one who is always up in the morning before the sun is peeping into his windows, and is ever ready for work. It doesn't make much difference whether he was born in this country or not.

Hartford, Vt., Jan. 17, 1870. AMOS FRENCH.

WHEAT CULTURE IN NEW ENGLAND.—DRILLING, PRESSING AND ROLLING, IN ENGLAND.

In 1861 I made a machine for my own use for drilling, having one fertilizing plough, and one seed plough, both on one beam, which did the work complete. The first plough deposited the fertilizer and covered the same; then the seed plough followed right in the same drill, dropping and covering the seed, all at the same operation, leaving a sufficient layer of earth between the seed and the fertilizer. I used for the fertilizer air-slacked lime. I drilled the wheat on land that I sowed onions on the year before. It was spring wheat. I drilled nearly an acre. The land was not very rich. I threshed and winnowed thirty-seven bushels of handsome wheat; some of it was as good as I ever saw in my life, but a part was on low springy land, and did not yield so well.

When the wheat was four to six inches high, I sowed grass seed and hoed the land at the same time, cutting up all the weeds, leaving the wheat free from weeds. The grass looked beautiful when I reaped the wheat, and was free from weeds. I drilled the rows of wheat about one foot apart. One man drilled it in one day.

In the previous articles on the cultivation of wheat, by our friend Hebb, mention was made of treading and pressing. Are there not lands that would be ruined by pressing and treading? I have seen lands in wet seasons in which wheat would never germinate if pressed and trodden, and I have seen other lands that would do well by pressing and treading.

Farming is an art that no man can compass fully. In the first place the farmer should make himself acquainted with the soil he has to cultivate, and this necessitates such analyses as will enable him to know how to treat the soil, and how to use different fertilizers. Some lands need one kind and some another, and some all kinds. Such knowledge will enable him to be more successful in the management of different soils and in the application of different manures. I have cultivated land for forty years, from four hundred acres to four thousand; so, Mr. Editor, you must think I have had some practice in farming. Still, I can learn something new every day and every year.

I should like to write more, but this article, the first I ever attempted to write on agriculture, is already, perhaps, too long. If I had had as much practice in writing as in farming, I might have done a little better. Hereafter I may offer some remarks on restoring lands to fertility by different fertilizers, and by different modes of cultivation.

Lowell, Mass., Feb., 1870. THOMAS WILSON.

REMARKS.—In Mr. Hebb's article on the use of the presser-roller, and on treading wheat fields, it was expressly said, "this mode of cultivation is applicable only in cases where the soil is too loose and pliable for the healthy and continued growth of the wheat plant, as in case of a heavy clover lea, &c."

—The wool clip last year amounted to about 150,000,000, or 52,000,000 more than in 1852, and was worth about $62,000,000. The stocks on hand in Philadelphia, New York and Boston, at the beginning of the current year, were 15,900,000 pounds, against 24,500,000 a year previous—showing a deficiency of nearly 8,500,000 pounds.

AGRICULTURAL ITEMS.

—The directors of the Sacramento Valley Beet Sugar Association, have determined to enter largely this year into the cultivation of sugar beets, and the manufacture of sugar therefrom.

—The trustees of the Maine State Agricultural Society are to meet at Bangor the last of this month to consider proposals for the location of the next Show, and to decide upon the same.

—The *Country Gentleman* makes a good point when it says, in answer to a request for the address of a stock-breeder, that, as he never advertises, it is fair to suppose he has nothing to sell.

—A distinguished poulterer says, that the occasional use of onions, mixed and fed to poultry with their other food, is one of the best ways of keeping a yard of poultry in health.

—In the Willamette Valley, Oregon, wheat is sown in the latter half of March or first half of April; oats and barley in April and May. Turnips should be sown in April. A correspondent of the Willamette *Farmer* says it is useless to sow field turnips there in June or July. The drought and bugs destroy the young plants.

—The Northwestern Flax Association held its first annual meeting at Cleveland, Ohio, Jan. 26. A memorial to Congress was prepared, stating that over 500,000 acres of flax are grown for the seed, in the States of Ohio, Indiana, Illinois, Wisconsin, Iowa and Minnesota; and praying for the continuance of the present duty on gunny cloth.

—L. F. Allen writes the American Institute Farmers' Club that while there is no uniformity of shape or growth in the horns of Short-horn cattle, they have one peculiar characteristic; an oval shape near the root, gradually assuming a roundness near the extremities, and a hazy or neutral appearance in color. They are also finer in grain and more delicate in appearance than the horns of common cattle.

—A correspondent of the New York Farmers' Club, from Maryland, reccommends lime as a preventive of club-foot in cabbage. He says that fifty bushels of shell lime, per acre, every five or six years, or whenever cabbages begin to "club" will enable a man to grow cabbages on the same ground twenty years in succession. He raised cabbages last year on land which has been growing this vegetable thirty years in succession.

—To obviate the hurry and consequent imperfection of the entries of stock and other articles at County Shows, for making a record of which the secretaries often have but a few hours, the old Kennebec, Me., Society has decided to have in each town a special committee of one who shall receive all entries of stock and other articles to be exhibited from his town, and forward them to the Secretary of the Society by 8 o'clock, P. M., of the day preceding the fair.

—A correspondent of the *Prairie Farmer* says, "Take hog's lard, melt it and mix with it a little sulphur and apply the mixture thoroughly to a space six inches wide on either side of the back bone from the head to the tail of the animal. Do this on a warm, sunshiny day, and if there is a living louse on the animal, twenty-four hours afterward, I won't say that I will eat it, but I will say that louse has a stronger constitution than any other specimen with which I have come in contact."

—J. C. Barnes of Fort Fairfield, Me., raised the past year about 5400 lbs. of pork, to produce which he used up 900 bushels of grain, mostly buckwheat. Some oats and peas were used, and are considered valuable as tending to harden pork. One of his hogs, seventeen months old, slaughtered a few days ago, weighed 553 lbs. The value of the feed is estimated to be $370. Value of pork, at 12½ cts. per lb., $675.

SAMPLE OF WILTED HAY.

In the discussions at the late Farmer's Convention, at Lewiston, Maine, much was said in relation to the new manner of curing grass by *wilting it, only*, and then mowing it away as compactly as possible in large quantities. Several gentlemen of the highest respectability stated this to be their practice, and that the grass so cured was worth more than when made by two or three days' drying; one of whom, Capt. Taylor, of Winthrop, said it was worth twenty-five per cent. more than grass exposed to the sun a part of two days.

One of the agents of this paper, Mr. EDWARD P. FROST, has recently visited Houlton, in Aroostook county, Maine, and there called upon Capt. V. PUTNAM, formerly a Massachusetts man, who kindly showed Mr. Frost his stock and the hay upon which it fed. A sample of this hay is now before us, sent by Mr. Frost. This sample was taken from a bay of twenty tons, and was cured by wilting it merely, allowing it to remain in cock a day or two, and then packing it away in the bay. This hay was examined by the members of the *Concord Farmers' Club*, and pronounced excellent.

Mr. Frost states that Capt. Putnam has a fine stock of cattle, which give ample evidence of feeding plentifully upon the best of hay.

BITING HARD!—The next time Patrick cleans the horse, he will be more gentle in currying his legs. If he is not, there will probably be more photographs of the horse's teeth, on the place upon which he sits down! Never use the curry comb upon the legs of a horse below the knee. There is no flesh on that part of the leg, so that, in careless hands, the curry comb goes raking over the bones and causing severe pain. Even a good-natured horse will not always be quiet under such treatment. Use a wisp of straw, or, if the mud is plentiful, a smooth stick will take off most of it. Until Patrick can sit down comfortably again, he certainly will remember to be gentle when cleaning "old Jerry's" legs.

[Entered according to Act of Congress, in the year 1870, by R. P. EATON & CO., in the Clerk's Office of the District Court for the District of Massachusetts.]

RURAL ARCHITECTURE.

BY GEO. E. HARNEY, Cold Spring, N. Y.

DESIGNED AND ENGRAVED EXPRESSLY FOR THE NEW ENGLAND FARMER.

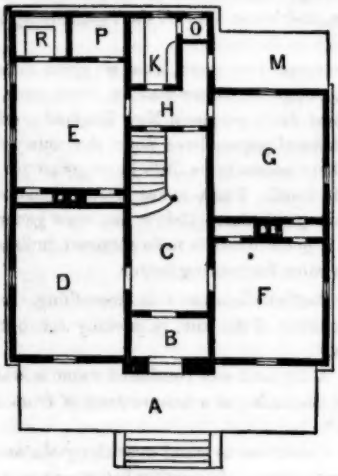
No. 1.---A FRENCH ROOF SUBURBAN HOUSE.

In the year 1859,—eleven years ago,—we commenced a series of papers in the pages of the NEW ENGLAND FRAMER upon Rural Architecture and the improvement of country places, which papers were continued through three or four years, during which time we presented to the readers thereof some twenty or more pictures and plans of rural cottages and farm houses, and whatever else came within the range of the subject.

The acquaintance was so very pleasant to us that, after seven years of intermission,—vacation we will call it, if you please,—we propose to renew it, and during this year shall present some new designs, and give some further hints about building suburban and village houses, and kindred matters.

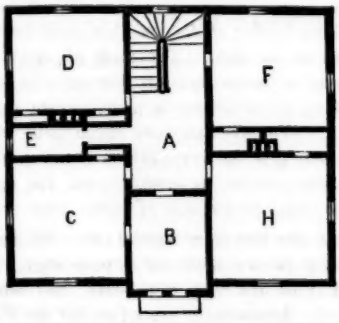
The design which we shall offer at this time has very much of the modern French character in its exterior, though in a modified form. It is nearly square in plan, measuring 40 feet in width and 38 in depth. A slight projection, surmounted by a pediment, gives strength to the front of the design and allows of a recess at the front entrance doors. An ornamental terrace, 10 feet wide, runs along the entire front, and from it we enter the vestibule, B. The house is placed so that the floor is about five feet above the ground, and the foundations are surrounded by a banking up to the bottom of a split stone underpinning. The building is of wood, boarded and clapboarded on the outside; the roof is French, the lower pitch very steep and the upper not

so steep, yet having slant enough to slate. There is a small deck or flat on top, ornamented by a cresting of cast iron. The vesti-



Ground Plan.

bule, B, is 4 feet deep, and opens directly into the hall, C. This hall is 8 feet wide. D is a parlor, 15x21, and directly back of it is the kitchen, E, 15x18. The chimney is between the two rooms, and on each side is a closet for shelves. H is a back entry, having a door opening out upon the veranda, M. K is a large store-closet, fitted with shelves and drawers, and O is a pot-closet, opening out of it. P is a sink-room, and R is another kitchen



Chamber Plan.

closet. A part of the kitchen and all these closets are in a one-story addition, with a lean-to roof. G is the dining room, 15x18, and F the library, 15x16.

In the second story, A is the hall; B a small chamber, 8x11; C a chamber, 15 feet square; D a chamber, 15x13; E a bath room; F a chamber, 15x16 feet, and H a chamber 15x16.

The attics and cellar are left wholly unfinished at present; but there is room in the former for five good chambers, and in the latter for a laundry, store-rooms, furnace, coalbins, &c., &c.

The interior finish is all to be plain, of pine; the walls lathed and plastered, and neatly finished with a skim coat. The first story is 10 feet high, and the second 9½. The cost would be about $10,000.

REMARKS.—We present a rather high cost building, as the first of the series. This fault will be remedied in future plans, as the design of the architect is to give plans suited to every one's ability, and the majority of them will be quite moderate in cost. As combining originality and beauty of design the series will prove valuable for builders and carpenters, as well as pleasing in artistic execution.—[EDS.

A SMALL BARN.—Mr. E. J. Carr, of West Hampstead, N. H., sends us plans of a barn 26 by 36 feet, which he thinks will better meet the wants of small farmers than those of the larger ones that we have published. But his arrangements are so nearly similar to that of the first floor of the plan on page 184 that it is hardly necessary to give his drawings. His bay ocupies the whole of one side of the barn floor. On the other side the stable is divided by a passage-way across it, with outside door, into two unequal divisions, the large one for cows and the smaller one for horses.

A DAIRY TO BOAST OF.—The St. Albans *Messenger* says:—Mr. Nahum Brigham of Bakersfield, from fifteen cows, made during the dairy season just closed, sixty tubs, or 3000 lbs. of butter. He sold it for forty-five cents a pound, realizing $1350. He also raised ten calves, now worth $100, and 1000 pounds of pork, which he sold for $130—making as the proper income of the dairy $1580, besides supplying his family. He is now making butter at the rate of one tub a week.

Mr. Brigham is a correct farmer. He selects the best stock he can find and then keeps it in the best condition. He does not believe in pasturing all the cows the fence will hold, and in the winter, besides first quality of hay he is a liberal feeder of grain. It pays, as the above account shows. Besides, he is a neat farmer. Everything is kept in its place and his work is done in time. This is the great secret of happiness in farming, if not of success, and every farmer who drives his work and is not driven by it, will find it true.

BUTTER-MAKING.

Somewhere I read a statement that the editor of the Farmer said in a recent meeting of farmers, that "not more than one tub of butter in ten sent to Boston market is really a choice article;" or in other words, nine tubs, on the average, out of every ten are of inferior quality. I have not the report at hand and do not quote the precise language. Now if this is true, I wish the editor, or some one who knows, would tell us the reason of this inferiority. Is the fault in the making, the packing, or the storing? Is it in the flavor, the color, or the salting? Is it in the milk, the place of setting, length of time it remains before skimming, in keeping the cream, time and manner of churning, mode of working after churning, or what? Tell us precisely, and in detail, the reasons.

The butter interest is of too great magnitude to be neglected. The remedy should be sought out, made known and applied. I am satisfied that the readers of the Farmer, at least, are desirous of making not only good butter, but *the best* that can be made. Vermont farmers, with their sweet, fertile pastures, and favorable climate, *ought to beat the world* in their dairy products. Tell us how!

Enquirer.

Essex, Vt., Feb. 14, 1870.

Remarks.—The "Editor of the Farmer," alluded to above, did make the statement, (at the late Farmers' Convention, in Manchester, N. H., when the subject of "the dairy" was under consideration) that he had called upon several of the leading butter merchants of Boston, and asked them the following question:

"What proportion of all the butter which comes to this market, should you call good table butter?" *Not more than one pound in ten*, was the usual reply! And, from looking over the butter which came to the stalls in the market, we judged that they were very near the truth.

We are inclined to think that fully one-half of all the butter coming into New England markets, is "*made over*," before it is retailed in small parcels. That is, it is taken from the tub, worked over by the aid of machinery, or otherwise, washed, and in some measure *purified*, by the use of alkalies or some other agents. It is then newly packed in a neat and tasteful form, and sold.

Large quantities go to confectioners, eating houses and pastry cooks, but even there cannot be used until it passes through a cleansing process. All this is sold at greatly reduced prices, and the farmer is the principal loser.

There is no need of this. The fault lies in all the points which you have enumerated. Want of cleanliness in milking; impure places for setting the milk; want of proper ventilation; allowing the milk to stand too long, and the cream, also; too little care in observing the temperature of the cream and churn, in churning; exposure to the air; and added to these, and worse than all the rest, *leaving buttermilk in the butter!*

Over and over again, have we given rules in the Farmer for butter-making, from some of the best dairy people in New England; other agricultural papers have done the same, and yet there seems to be little improvement in the article itself. Farmers are losing immensely in this particular. Below are some general, and, if *good* butter is to be obtained, indispensable rules for making butter.

1. Perfect *cleanliness* in everything, from the milking of the cow, to packing the butter down.

2. A dry and well ventilated room in which to set the milk; at a temperature of from 60° to 63°.

3. Cream not to stand over thirty-six hours —twenty-four is frequently better—in winter, and in summer, twelve to eighteen hours, in most dairy rooms.

4. Stir the cream and add a little salt at each time of skimming the milk.

5. Churn often; twice or three times a week is better than only once.

6. One ounce of salt to a pound of butter will more nearly meet the average taste than a larger or smaller quantity.

By careful observation, it will be found that the *quality* of the butter, when properly made, will depend more upon the original butter making quality of the cow, than upon the character of the feed. The milk of every cow should be tested, and only that used for butter making which throws up a rich cream plentifully. We have had cows whose milk would not only give but very little cream, but would actually prevent, in some degree, the cream from rising on the milk of other cows.

An excellent dairy woman furnishes the following as her mode of proceeding: "The milk is set in a dark, cool cellar, the temperature by thermometer averaging 60° to 63°. I gather the cream into a stone pot, salt the week's cream, for one cow one teacupful of fine salt, and stir the cream every day to keep it sweet while accumulating; then it is strained into the churn; it is about thirty minutes coming to butter. I then drain off the buttermilk

and turn into the churn four quarts of cold well water, turn the crank three times to rinse off the buttermilk, then take it from the churn and salt it, allowing to every pound of butter two ounces of sifted salt. I put half the salt in when taken from the churn, set it into the cellar four hours, then work over by hand in a tray, working out the buttermilk, then put in the remainder of the salt and let it set three hours. I then work it over and beat with wooden butter-beaters until the butter is dry. Butter made in this way will always have a grain to it, and will keep perfectly sweet through the winter."

Butter made as above received a premium at an agricultural exhibition. The quantity of salt used, is unusually large, but some of it would, of course, be thrown out in working over the butter, the first time. In the best dairies, the butter is never salted at once, but a portion of the salt required is applied at the last working, just before it is to be packed.

For the New England Farmer.

NEW POTATOES.---A WINDOW FARM.

Sometime ago I sent you a few of my new varieties of potatoes which I raised from potato ball seeds. They were not fair specimens as to size. I am away from home much of the time, laying cement water pipe to bring water to the houses and barns of the farmers, during the spring, summer and fall; and in my absence, my folks got a taste of these varieties of potatoes and eat all of the best of them. We raise the best kinds of the old varieties of potatoes that we can get, but they preferred these to any we raise.

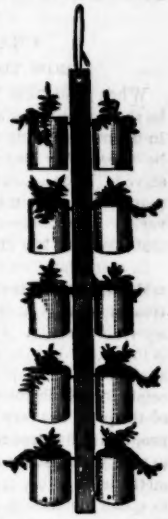
The potatoes I sent you which resemble the Jackson Whites in shape, but have a yellowish purple cast to the outside, are quite early. I call them the "Early Golden." Those with the pink streaks and eyes, that are shaped like the Oronos are late. I call them the Pink-eyed Queen of the Sod. They have the most hardy vine I ever saw, and are the most free from blight and rust. The balls which grow on them are the hardest and greenest I ever saw. I have a lot of balls from many varieties which I put into the cellar last fall; but while the balls of every other variety are dried and decayed, these remain green and hard. I think this potato will not be likely to rot.

My Window Farm.

I have begun to raise seedling potatoes. I have about fifty plants which have been up for over a month. From these I hope to get potatoes in season to plant this spring. I have another lot planted.

I have a way of arranging the boxes in which I raise potatoes, tomatoes and other plants, which I think the most convenient of any I have ever seen. It is not patented, so any of your readers, who choose, may use it.

To make the boxes I get a round stick of wood as large as I want the boxes. I saw off sections from this stick about one-half an inch thick. These I use for the bottom of the boxes. I then wind a piece of birch bark around and tack it to this bottom with small tacks, and take a thin stick and put on the inside where the bark comes together and drive a tack or two through the bark and stick, and the box is made.



I now tack these boxes on to sticks, say strips of lath, or the like, one above another, and attach a loop at the top of this stick to hang it up by. This figure represents a stick and boxes with plants in them. I think you will understand it, and see how readily it can be hung before the window on pleasant days, and taken down and removed and hung in a warm place on cold nights. To take care of a hundred boxes of plants arranged in this way is not one-tenth as much as it is to take care of as many separate boxes, and the liability of the boxes falling, and spilling the contents is much lessened. I tack about a dozen boxes on a stick, and seventy-five or one hundred boxes can be placed at a common window.

If any one has a better way of arranging plant boxes I would like to adopt it. I have begun another letter in which I give directions how to make a cistern. I think a common farmer by following these directions can make a good cistern. There are hundreds of the readers of your paper who are in need of cisterns, and are losing more, every few years, by doing without them, than their cost.

B. LIVERMORE.

Hartland, Vt., Feb. 8, 1870.

SALT IN COOKING VEGETABLES.—If one portion of a dish of vegetables be boiled in pure water, and the other in water to which a little salt has been added, a decided difference may be observed in the tenderness, flavor, and, if potatoes, mealiness of the two. Onions are probably more improved by being cooked in salt water, than any other vegetable. Much of their unpleasant smell is taken away, and a peculiar sweetness and improved aroma are decidedly apparent. Salt hinders the evaporation of the soluble and flavoring principles of vegetables.

Ladies' Department.

DOMESTIC ECONOMY;

OR,

HOW TO MAKE HOME PLEASANT.

BY ANNE G. HALE.

[Entered according to Act of Congress, in the year 1866, by R. P. Eaton & Co., in the Clerk's Office of the District Court for the District of Massachusetts.]

CHAPTER XXI.

HOW TO COOK MEATS.

When good meat has been provided it should be the housekeeper's pride to present it at table in the most inviting manner. To this end it must be thoroughly and carefully cooked and neatly served. But she should not be ambitious of displaying her skill in the concoction of too great a variety of dishes—rather be content with a few that stand the test of healthy appetites.

In many families noted for the nicety of their table arrangements and for the excellent preparation of other viands, the cooking of meats is a miserable failure. I think that the cause of this is to be found in the many attempts that are made at elaborate and fanciful cookery, numberless receipts for which come fluttering daily on the wings of the press to every door, and those who have a propensity for experimenting are too often tempted to turn with disdain from simple and wholesome methods, or to use them carelessly, while willing to spend much time, and no small means, in trying to make these indigestible messes appear desirable and economical. Be honest enough to do all plain cooking well before you adopt a more pretentious style, and you will be spared the pain —which many have felt—of knowing that the unpalatable food that you have set before your family has driven any that are dear to you to seek better fare or a substitute for it at the restaurant or bar-room.

All meat—whether flesh, or fowl—*must be thoroughly cleansed in cool water* as the first step towards cooking. Many persons say that for broiling, frying, or roasting, this injures the appearance of the meat and wastes its juice. Better so, then, than to have the filth which it has contracted in passing from hand to hand and from place to place before it lay upon the kitchen table. But if the meat be briskly rubbed in the cool, clear water and immediately wiped dry with a clean towel such is not the case.

Pork that is cooked in its rind must have the rind cleared of all impurities by scraping and then thorough washing. Salted and pickled hams, and bacon should be soaked in cold water,—if very large, two days—before they are cooked; they are then tender and juicy. Hearts, livers, kidneys, all harslets, must be trimmed free of all waste, and then soaked three or four hours before they are fit to cook. Brains should be washed and then soaked an hour in lukewarm water. Heads need five or six hours soaking after a careful washing. Calves' heads and feet, if not cleared of the hair, must be dipped in scalding water, sprinkled with a little fine resin, and scraped; then let the hoofs lie in the hot water till they can be pried off easily with the point of a knife. Then soak them five or six hours in cool water.

All utensils for cooking meat should also be perfectly clean—scalded with weak suds after using, and kept clean till needed again; especially is this necessary for the block or board on which the meat is laid to be cut and arranged previous to cooking.

If the meat contains large bones get the butcher to saw or chop them before you attempt to cut or prepare it. Always use a sharp knife, and cut with a sawing motion; a dull knife, by tearing the fibres, wastes the juice—as well as gives an unsightly appearance.

Have a clear fire, and keep it burning steadily till the meat is completely cooked; and always place the meat in a hot dish as soon as it is done, and keep it hot till served;—with mutton in hot weather, the plates should be heated also. From these few general directions let us pass on to particulars.

A steak is the easiest of all pieces to cook, and because it is so easy—merely to broil it—what might be a most delicious and nutritious dish is too often presented at table no more inviting in odor and appearance—and nearly as indigestible—as so much sole leather.

Beef, pork, veal, venison, or mutton,—whichever the steak may be—should not be more than half an inch in thickness—particularly pork and veal, which are better even much thinner. Don't neglect to wash and wipe it as soon as it comes into your possession, and then hang it in a cool place till time to cook it.

A glowing fire of wood coals, or of charcoal, is considered the best for broiling; but a red fire of anthracite is about as good.

Griddles,—two, which enclose the meat, thus obviating the necessity of turning it, the griddles being turned instead, are the best style of gridiron. Grease the bars and place near the fire to heat two or three minutes before the meat is ready. Then lay the steak on the meat-board and with a dull chopping-knife, or with the back of the meat-knife, chop it lightly across the grain and then along the grain of the flesh on both sides. For tender steaks two minutes chopping is enough, but tough meats requires more. Place the steak over the fire and give it your whole attention till it is done, standing steadfast as a martyr at your post, for it needs constant watching and almost incessant turning. At the first hint of the starting of the juices arrange the gridiron to pour it into the dish as it flows while you raise and turn it—the turning being as

frequent as the rise of the juice. When the fat that drips from it blazes shake salt upon it to put it out. Five minutes, sometimes three, will suffice to cook the steak. When you think it is done let it fall from the gridiron to the dish, and make two or three incisions in it, the juice should follow the knife, but the grain of the meat must have lost its raw appearance. (Tastes differ so much it is best to cut the meat into convenient pieces and broil some more than others, but never enough to dry up the juice). If you find it is cooked sufficiently, shake salt over it—and pepper if you choose—and then lay small thin pieces of good butter here and there on both sides, and if not immediately needed cover closely and keep the dish on the top of the vegetable boiler over hot water; the butter with the juice makes sufficient gravy. Birds and small game need only to be split in two for broiling; cut chickens for the same, or for frying, as they are carved.

Beef should never be fried—a steak nicely broiled and only salted is better than it can ever be fried.

Mutton and lamb chops and cutlets, as well as pork and veal, are very nice if fried slowly in as little fat as will allow them to be easily turned—which they should be frequently. Salt sets the juices free, so do not salt them till after they are taken from the frying-pan. Ten minutes over a steady but gentle fire will cook lamb and mutton, but pork and veal need fifteen at least; and veal to make it tender should be parboiled twenty minutes before it is fried.

Salt pork fat is best for frying veal; the other meats may be fried in their own, or in beef fat, or in lard. Thicken the gravy by stirring into it when boiling a little flour and water. (If you wish for dark gravy, brown the dry flour in the oven—some persons always keep scorched flour on hand for this purpose.) A teaspoonful of flour mixed smoothly with half a cup of cold water is sufficient for a pint of gravy. Continue the stirring while it boils three minutes, then salt it slightly and pour it over the meat. If you wish to cook the cutlets in a very superior manner beat an egg, dip them in it, and then cover them with bread crumbs or cracker before frying; or, dip the veal, after it is parboiled, into a batter made of beaten egg slightly thickened with flour and salted.

Livers, hearts, and kidneys, after they have been soaked, may be sliced one-third of an inch thick and broiled or fried in the same way as steak and chops; they are nicer if parboiled first, fifteen or twenty minutes; five minutes will then finish them.

Salt pork, previous to either broiling or frying, should be parboiled ten minutes. Cut the slices a quarter of an inch thick; pare off the rind and fry by itself, but place the slices in cold water and heat gradually to boiling. The pork is thus nicely freshened and the remainder of its cooking done more delicately. Set the water aside in which the pork is parboiled, and when it is cool remove the fat that rises and add it to the dish after the broiling or frying, and, if you like, thicken it with a little flour and milk; if you do not wish for gravy save it to shorten pastry, for which it is very nice.

Sausages should also be parboiled in the same way before broiling or frying; if in skins prick them first very closely with a fork, or the skins will be likely to crack and the meat be scattered. Some persons parboil and partially fry them soon after they are made, then pack them in a stone jar and pour melted lard over them, keeping them thus free from taint some months. Bacon keeps very nice if it is sliced, the rind trimmed off, the lean separated from the fat, the fat slightly fried, and then both lean and fat packed in a jar and the liquid fat that has tried out poured over it. If not prepared in this way it should be sewed up in cloth or thick paper bags immediately after it is smoked, and laid down in clean shavings, sawdust or straw (dry oats are very good for this purpose) and kept in a cool, dark place. The lean of bacon requires much less broiling or frying than its fat, so it is always best to separate and cook each by itself, and when done arrange them together on the dish.

A slow, moderate fire is best for frying all sorts of meat; but fried meat is so hard to digest it should seldom be seen at table—that is, fried lean meat; it is more generally necessary to fry fat meat; but always broil, if possible, in preference.

To roast or rather to bake meat—as range or stove ovens are more generally used than roasters—first see that your oven is hot enough to hiss loudly at a sprinkle of cold water, then place the meat, the bony side downward, upon a griddle, in a sheet-iron pan. Use no skewers, or as few as possible. Pour into the pan boiling water to the depth of half an inch, and dissolve in this water a teaspoonful of salt for every five pounds of meat. Replenish the evaporation of this water every half hour with more of the same temperature.

In most ovens, with a brisk fire, twenty minutes is sufficient time to allow for roasting each pound of beef, mutton, lamb or venison; pork and veal require half an hour, a shoulder or leg of pork rather more. Look at the meat often during the first fifteen minutes. If it browns very soon lay over it a buttered paper or set a pan of cold water in the oven with it. When the upper side is nicely browned turn it, placing the bones upward; notice how long this has taken, and when the same time has elapsed shake salt over all, baste with the liquid in the pan, sprinkle with flour from the dredging-box, turn the bony side down again, and reverse the ends. And thus every twenty minutes turn, baste and flour the meat till you can penetrate it easily with a fork. If it is very fat, before it is half done, that which has dripped from it should be dipped or poured off; and, afterward, at every basting. This should be saved, clarified by boiling in water a short time, (if the meat was highly seasoned a few slices of raw potato fried in

it will remove the flavor) and used for making pastry or for frying cakes or meat while it is new. Thicken the gravy as for fried meats and serve in a separate dish. Cooked thus without skewers, frequently basted and floured, the meat retains its juices and is tender and well flavored.

Unless veal is quite fat slices of salt pork should be skewered or tied to it when it is about half done, and roasted with it; or else butter be melted in the gravy with which it is basted.

A leg of veal or of mutton is much improved by stuffing. For this make deep incisions in the meat and fill them with equal portions of fresh bread crumbed and of salt pork cut nearly as small as sausage-meat, seasoned with pepper, pulverized sage and sweet marjoram or thyme,—and sew up these with a strong thread—to be cut and taken out before carving. Thicken the gravy and serve as with other roast meats.

A fresh shoulder, or leg, or cheeks of pork to be roasted should have the rind cut through with a sharp knife in stripes half an inch in width. Pulverized sage and pepper should be rubbed into these cuts, and then the rind greased with butter or lard to prevent its blistering. The lean portions may be stuffed by making incisions and filling them with bread crumbs moistened with milk, or a beaten egg, and seasoned with sage or marjoram, pepper and salt to the taste. Be careful not to scorch the rind—turn it and baste it very frequently to prevent this.

A pig to be roasted should be killed when a month old. Wash it well, cut off the feet at the first joint, and sprinkle salt over it an hour before it is stuffed. The stuffing should be similar to that for a leg of pork; fill it full with this, rub the skin with butter to prevent blisters, and tie the legs to keep them in the proper place. Shake flour over it, and set it on a griddle in the baking pan, the pan being half full of hot water. Turn it and baste and flour it very often. If you like, add butter to the gravy when it is half baked. Boil the liver and the feet an hour, and then add the liquor in which they are boiled to that in the baking pan; cut open the feet and chop the liver, and after the gravy is thickened add them to it. Three hours will cook it.

Rabbits and woodchucks are highly esteemed by some persons; they need similar preparation and cooking to a young pig, but will be baked in two hours.

Soups and broths, as well as stews, are generally made of fresh meat. Beef and pork make the best soups; and for these the remnants of a roast, or cold steaks or cutlets, with their gravies, are always desirable. Three hours will cook a soup or stew, if of raw meat,—except when of a beef shin; for this five hours is none too long. Cooked meat may be made into a soup in two hours. Put the meat, the bones having been broken or chopped, into cold water—a quart for every half pound—and salt and pepper to taste. Heat it gradually and boil it slowly and gently. When the water gets hot pour in half a pint of cold water to set the froth that rises, and then skim it off; it will continue to rise for fifteen or twenty minutes, and must be all skimmed off before the water boils. When the meat is ready to fall from the bones, skim off what fat floats on the liquor, (this, if clarified, makes excellent shortening,) and if you have gravy stir it in at this time. Then, if you like cloves, or savory, or thyme, for seasoning, mix a little with cold water and stir this in also; at the same time put in pared and sliced potatoes, carrots, turnips, onions or garlics;—six large potatoes, two carrots, two onions, and one turnip, are sufficient for a gallon of soup. When these boil add barley, rice, and vermecelli, if you like; and when the vegetables are boiled tender make dumplings,—taking for a dozen a pint and a half of flour, a pinch of salt, a teaspoonful of cream tartar, half a teaspoonful of soda or saleratus, and water enough to make dough that can be easily moulded. Steam these in the steamer that fits the brim of the dinner-boiler, and when they are done—ten minutes will cook them—mix a little flour with cold water and stir into the soup; let it boil three times, then add the dumplings and take up the soup and serve immediately. For variety the vegetables may be cut as small as dice, and when done strained from the soup by means of a hair sieve or a colander. Tomatoes—two or three to a gallon—are a great addition; skin and slice them, and boil as long as the other vegetables.—Stews require a third less water and more vegetables than soups.—Broths need the same vegetables as soups, but they are boiled without slicing, and the rice, or barley, is the same. Green parsley, or savory, and pepper-grass, and thyme, with the petals of the common marigold, are used as flavoring,—and no seasoning but salt.

For a meat-pie the meat should be parboiled half an hour; the pan, if the pie is to baked, lined with a crust made of a quart of flour, a tablespoonful of lard, a pint of sour cream and saleratus to sweeten it, and a little salt or sweet milk or cold water with a teaspoonful of cream tartar and half a teaspoonful of soda may mix the flour. Lay the meat and place the bones, in such a way as to fill the pan; or arrange skewers, or set a bowl within for the same purpose. Thicken the gravy, and season with salt and pepper and pour in; it is a good plan to make gravy enough to reserve a pint or more to replenish what is evaporated in baking. The crust should be a quarter of an inch in thickness for the lining, and a little thicker for the covering. If there is any crust remaining after the cover is laid, cut it into strips and make knots and twists of it to ornament the cover. A pot-pie may be steamed or boiled—(using the same for crust as if it were baked)—on the back of a stove, if great care is used, and the fire covered with ashes to moderate the heat. An excellent soup or broth may be made from the liquor in which a leg of mutton—fresh—is boiled; or when a calf's head is

cooked; also from the gravy of turkey or other fowl, whether roasted or boiled.

Tough pieces of beef may be stuffed and stewed and thus form a very savory dish. Cut incisions in the meat, and then take slices of salt pork and cut them into pieces the size of dice; season the pork by mixing with it pulverized sage and pepper, and fill the incisions with this, and sew or skewer them together. Set it to boil in cold water—a pint for every pound,—or till the meat is ready to fall apart. Thicken the gravy as for roast meat, and pour over the beef in a deep dish, and serve hot, with baked potatoes. A heart, or meat from the upper part of a shin, is very nice cooked thus.

Corned beef should be put to boil in very warm —but not scalding water,—then the juices are retained in the meat. It should be boiled slowly—it will be tough if boiled fast,—allow half an hour for boiling each pound. If it is to be eaten cold, after it is boiled tie it with tape, or strips of cloth, wound around it as tightly as possible, and place it between two dishes beneath a heavy weight—a flat-iron will answer—till it is needed. It will then be as nice as tongue.

A beef's tongue that has been salted long needs soaking six hours. If but slightly salted it may be boiled directly from the brine;—there is no danger of boiling it too much—give it six hours, at least. A ham, if very large, should be boiled five or six hours. It is very nice boiled two or three hours and then baked the same length of time. Remove the rind before baking it, and sift over it pounded crackers or dried bread, or dredge it well with flour. It should be baked in a moderate oven.

A calf's head should be set to boil in cold water with a spoonful of salt, the liver and the heart to accompany it. Skim the liquor till no froth rises. Boil it till the flesh is loosened from the bones. The brains should be taken out when the head is soaked, washed and soaked by themselves and boiled—tied in a cloth—ten or fifteen minutes. Skin and trim the tongue, and remove the bones of the head. Take part of the heart and liver, also of the head meat, and the brains, and chop fine; boil two eggs till they are hard and chop those and mix. Add to this half as much of stale bread crumbed. Season with butter, pepper, salt, and sage; and stew with a little of the liquor in which it was boiled; and serve this hash in sauce for the meat. Make soup of the liquor. The next day chop all that is left and make into hash the same.

It is so much trouble to clean and cook tripe that it is usually boiled before it is sold by the butchers. The best way to prepare it then for the table is to steam it, adding a little salt, butter and pepper. Cut into pieces three inches square and dipped into batter made of a beaten egg and a little flour and then fried in butter or salt pork fat, it makes a rather more handsome dish—but is less digestible; —or it may be fried without batter.

The best way to cook a hog's head is to boil it, with the feet, and make all into brawn, or cheese, as it is called. The head should be cut open, the nostrils cut off, and the eyes taken out. Then scrape and wash it well,—particularly the ears,—and cut these off before boiling. Boil it till the meat will fall from the bones; then chip it—not very fine—season it with salt, pepper, and sage, put it in a deep dish to cool, and cut in slices to fry, or eat it cold. Some persons thicken the liquor in which the head and feet are boiled with Indian meal—three tablespoonfuls to a gallon—scald it well, and then mix the chopped meat with it.—Pigs' feet scraped and soaked till perfectly clean, then corned slightly, and boiled, and then pickled a week in spiced vinegar, are much relished by some.

All housekeepers know that there are frequently remnants and bits of cooked meat—left from corned beef or mutton, or taken from soups and stews and broths,—which are not presentable at meals in their fragmentary state, and so they convert them into hash. This hash is too often so carelessly prepared as to be reluctantly eaten, if not absolutely detested; but it may be made a very enjoyable dish. The best way to make it is to boil the meat anew, and to chop it when cold as fine as if it were sausage meat. Then add to it half its measure of potatoes—chopped equally as fine—season it with salt, pepper and pulverized sage; and fry it either in small cakes moulded with cold water, or in one large cake that covers the bottom of the frying pan;—a little water must be added to mix the ingredients well, and it should be fried in just fat enough to allow it to be easily moved. Brown the cakes nicely on both sides, and if something extra is desired, stale bread crumbed fine may be substituted either partially or entirely for the potato. Made and cooked thus it is a very appetizing dish.

For the New England Farmer.

DOMESTIC RECEIPTS.

Potato Biscuit.

Boil two common sized potatoes with those you cook for dinner. Peel and mash very smooth and fine, add one quart of flour and a little salt to the hot potatoes, half a cup of good yeast, mix with milk-warm water and set in a pretty warm place. About an hour before tea time, mould up into biscuit, put into a baking pan and set on the stove hearth. When they begin to rise well, put into a quick oven and bake to a delicate brown. They will be found light, sweet and moist.

Raw Potato Yeast.

Grate three large raw potatoes on a coarse grater, pour into the mass of pulp enough boiling water to make a clear thick starch; add one-half cup of sugar, one-quarter cup of salt. When lukewarm add one cup of yeast. Keep warm until it rises. One-half cup of this yeast will rise three large loaves of bread. By boiling a handful of hops in the water you pour over the potatoes, this yeast will keep two months in hot weather. S. B. S.

For the New England Farmer.

USEFUL RECEIPTS.

Tooth Powder.

Half an ounce powdered orris root; two ounces, powdered charcoal; one ounce powdered Peruvian bark; half an ounce prepared chalk; twenty drops of oil of lavender or neroli. These ingredients should be thoroughly mixed in a mortar. This tooth powder possesses three essential virtues; it sweetens the breath, cleanses and purifies the teeth, and preseves the enamel.

To Extinguish a Fire in a Chimney.

So many serious fires have been caused by chimneys taking fire, and not being quickly extinguished allowing the wood-work to become charred and then blaze, that we think the following method should be more generally known. Throw some powdered brimstone quickly on the flames in the grate or fire-place, and then hold up a screen of a board or an iron sheet, to prevent the fumes from descending into the room. The vapor of the brimstone ascends into the chimney and effectually extinguishes the burning soot. If brimstone is not at hand throw half a pint of fine salt on the flames.

S. O. J.

DOMESTIC RECEIPTS.

Bubble and Squeak.—Cut into pieces convenient for frying, cold roast or boiled beef; pepper, salt and fry them; when done, lay them on a hot drainer, and while the meat is draining from the fat used in frying them, have in readiness a cabbage already boiled in two waters; chop it small, and put it in the frying pan with some butter, add a little pepper and salt, keep stirring it, that it may all be equally done. When taken from the fire, sprinkle over the cabbage a very little vinegar, only enough to give it a slight acid taste. Place the cabbage in the centre of the dish; and arrange the slices of meat neatly around it.

Baked Apple Dumplings.—Choose large russett or sour apples that cook tender; peel and quarter them, take out the cores, and use one apple to a dumpling. Pinch your pie-crust well, grease your pie pan, set your dumplings right side up; do not let them touch each other; set them in your oven, and bake a delicate brown. Eat hot with any sauce you prefer.

A Pippin Pudding.—Boil six apples well; take out the cores, put in half a pint of milk thickened with three eggs, a little lemon-peel, and sugar to the taste; put puff paste round your dish, bake it in a slow oven, grate sugar over it, and serve it hot.

Remedy for Ear Ache.—There is scarcely any ache to which children are subject, so bad to bear, and so difficult to cure, as earache. But there is a remedy never known to fail. Take a bit of cotton batting, put upon it a pinch of black pepper, gather it up and tie it, dip it in sweet oil, and insert it in the ear. Put a flannel bandage over the head to keep it warm. It will give immediate relief.

AMERICAN GIRLS IN EUROPE.

I do not wish to undervalue English beauty, which is most satisfactory and enduring, and most of which will wash. But I confess that American beauty from New York to New Orleans has spoiled my eyes for any other; and when I am just getting accustomed to the solid English matrons and maidens, like Mr. Hawthorne, and beginning to like them—along comes a group of my fair country women on their travels, and they spoil it all again. Those dear Yankee girls—I fear you do not appreciate them at home. Here they admire and envy them—that is, the men admire and the women envy. On the continent they rave about them. Half a dozen American belles send a whole German town distracted. It is not only beauty and grace, but their wit, spirit and audacity. The continental customs favor their triumphs. No girl over there dares to say her soul is her own—let alone her body. She never goes anywhere without a *chaperone*; she never converses with a gentleman except to answer a question; she is of necessity insipid to the last degree. An American girl, on the contrary, asserts her freedom, goes where she likes, talks with every one she cares to talk with, says *du* to a German—just as she would do at home. He is overwhelmed, astonished, but all the more delighted. He tells his friends that the beautiful girl he waltzed with said *du* to him, and told him to bring her a glass of water, which sets them all crazy to be introduced, hear her say *du* to them, and be made water carriers likewise. Next day the whole town is talking about and staring at her—the women are in a rage—but the result is the conviction that America *must* be a great country, increased emigration, and the consequent progress of civilization.—*European Letter.*